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ABSTRACT

In order to determine whether or not systematic desensitization or hypnosis have any effect in alleviating the test anxiety of community college students, 30 Massasoit Community College student volunteers were matched for GPA and assigned to one of three treatment groups: (1) a systematic desensitization group, in which subjects listened to tape recorded training sessions in relaxation, and were asked to imagine the anxiety provoking scenes described on tape; (2) a hypnosis group, in which subjects listened to hypnotic inductions, and were asked to imagine the same anxiety provoking scenes; or (3) a control group. At the outset, each subject had a two-semester GPA of 3.0 or below and each had scored in the upper quartile on the Mandler-Sarason Test Anxiety Scale. Pre- and post-treatment examinations of GPA, scores on the Mandler-Sarason Scale, and two other self-report measures of anxiety, showed no significant effects of the treatment. It is concluded that these behavioral change techniques, found successful with other populations, must be critically examined for their suitability for two-year college students. Also included are a review of the evolution of community colleges in the United States, a discussion of the unique characteristics of community college students, and a survey of recent approaches to behavior change. Results are tabulated and the testing instrument is appended. (NHM)

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ABSTRACT

THE RELATIVE EFFECTIVENESS OF SYSTEMATIC DESENSITIZATION AND HYPNOSIS IN ALLEVIATING TEST ANXIETY IN COMMUNITY COLLEGE STUDENTS

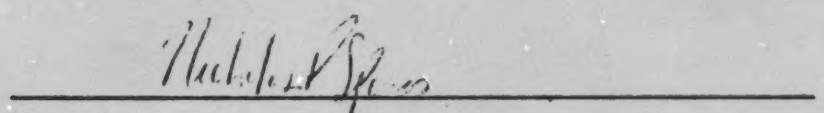
By

Roy D. Simmons, Jr.

B.S. University of Maryland, 1959

M.B.A. George Washington University, 1960

C.A.G.S. University of Massachusetts, 1966



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Dissertation submitted in Partial Fulfillment of
The Requirements for the Degree of
Doctor of Philosophy

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ABSTRACT

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The roots of American higher education are found in the Colonial college which provided an aristocratic conception of college education. Historical developments in the United States changed the purposes of higher education from aristocratic to meritocratic and, most recently, to egalitarian.

Based on recognition that there are human talents other than the intellect, universal higher education now appears the direction for American colleges. The two-year community college is the institution that has increasingly borne the brunt of the influx of an entirely new type of student. These students lack many of the traditional values, attitudes and skills expected from college students. New techniques appear necessary to help these students develop their potentials and adapt to the college environment.

Within the behavioral sciences techniques of behavior, change and modification has emerged. This report described a study which examined the usefulness of applying two such techniques - systematic desensitization and hypnosis - to two-year college students. Thirty unpaid students scoring

in the upper quartile on a test anxiety measure were assigned either to a control group, a hypnosis group, or a systematic desensitization group. Four dependent measures were employed: grade point average, objective rating of test anxiety, and two other self report measures of anxiety. Both pre and post-test analyses of variance showed no significant effects of the treatments.

The results of this experiment were discussed from several viewpoints, with emphasis placed on the fact that two-year college students represent a different population compared to their four-year college peers. It was concluded that behavioral change techniques, found successful with other populations, must be critically examined for their suitability with two-year college populations. The implications of behavioral techniques for administrators and staff in student personnel services were discussed. In addition, the report suggested directions for future research.

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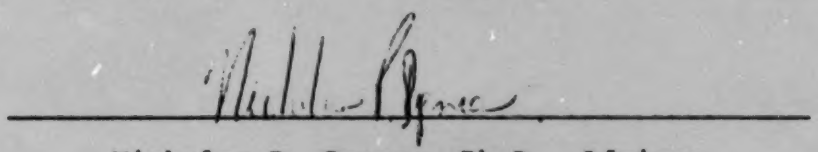

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CHAPTER I

THE COMMUNITY COLLEGE IN THE HISTORICAL CONTEXT OF AMERICAN HIGHER EDUCATION

Higher education in the United States is no accident. The founding fathers after erecting permanent shelters to live in, after building churches and a structure of government..."longed for, and looked after,...LEARNING. And then, it would seem, almost as a matter of course, there was Harvard" (Rudolph, 1962; p. 4). Although the recent course of higher education development in the new world may seem somewhat random and accidental, the early Pilgrim fathers had several specific purposes in mind that led to the nine American colleges that existed at the beginning of the revolution.

Their purposes were very British. Most of the founders of Harvard were Cambridge men, some were from Oxford, and they wanted, as so many Englishmen have before and since, a little bit of England in the Colonies. The state needed rulers. The church needed clergy. The society of the colonies needed cultured men to provide tone and taste that would recreate those parts of English society with which they did not dissent.

These early colleges were not popular institutions. They were aristocratic and elitist from the outset. Their

curriculum hardly implied that the colleges expected any of their graduates to put their hands to plow. During the first year Latin, Greek, logic, Hebrew, and rhetoric were taught; during the second year logic, Greek, and Hebrew were continued, natural philosophy was begun; in the third year metaphysics and moral philosophy were added to natural philosophy; the fourth year provided review in Latin, Greek, logic, natural philosophy, and a little mathematics. Certainly, none could accuse colleges like this of attempting any practical response to the needs of a frontier nation. The colleges had no such intention and this course would remain shaken, but generally unchanged until the Civil War.

After the American Revolution college founding increased at such a rate that by the time of the Civil War there were 250 colleges in the United States. The developments which led to the founding of so many colleges did not leave untouched the classical curriculum described above. Science, more math, politics, and economics gradually intruded into the schools. But these were intrusions. Colleges were not founded on the basis of burning curricular or other educational issues.

College founding in the antebellum period was in large part a product of denominational rivalry. Just as Yale's founding is often attributed to religious conservatives' horror at the liberal theology of Harvard, each denomination faced with the others heresies founded a college. The force of denominational rivalry was supported frequently

by sectionalism; every state, every sizable city wanted "its own college." The increased size of population, the increased wealth, and the optimistic frontier spirit all reinforced each other in a frenzy of college building. The feeling of the times might be seen in this quote from Rudolph (1962, p. 49)"...it was being pointed out that England was managing nicely with four universities for a population of 23,000,000, while Ohio with a population of 3,000,000 boasted thirty-seven institutions of higher learning."

As might be expected in the heady spirit that followed the revolution, change was in the air. The country was young, new, and growing, and the spirit of the times would nibble at the classical curriculum. As has been pointed out, new subjects entered the curriculum, first as curiosities, then as electives, then slowly as replacements for parts of the classical courses. Some thinkers in higher education were bold enough to suggest sweeping reforms of the whole course of study.

Philip Lindsley of the University of Nashville was one such reformer. Chafing in the conservatism of Princeton, where he was Professor of ancient languages, he accepted the frontier challenge of Tennessee in 1824. He envisioned a college free from petty sectarian disputes where every subject and every idea might be studied. He looked to the German university, in part, for his model for an institution which would not just pass on what was known, but

which would advance and enlarge knowledge itself. He looked toward a practical institution where not just the aristocratic leaders but also "The farmer, the mechanic, the manufacturer, the merchant, the sailor, the soldier... must be educated" (Rudolph, 1962; p. 117). He aimed for a truly practical, useful, education responsive to the needs of society.

Lindsley failed (Rudolph, 1962), so did Ticknor of Harvard, Marsh at the University of Vermont, and Abbott of Amherst. They failed to achieve widespread change, yet left their marks on the weakening classical curriculum.

That the challenges to the classical curriculum were taken seriously is epitomized in the Yale Report of 1828. This report put the weight of what was America's most prestigious college firmly behind the status quo. Nothing was new in this report. It supported the traditional curriculum, absolute values, the prescription of the curriculum by those who knew what ought to be known. It stood in the face of the massive change that would soon roll over it, yet it held back that change for a time. The report argued, for instance, that "French and German 'are studied, and will continue to be studied, as an accomplishment rather than a necessary acquisition'" (Rudolph, 1962; p. 133), and that the classical curriculum would teach the uneducated wealthy the necessary refinement to know what to do with their money, give it to Yale, of course.

Many things would counter the Yale report, some of them have already been mentioned. But there were other important forces too. Thomas Jefferson wanted a practical course of study for all men. He tried to get it instituted at William and Mary, and when he failed there he devoted his attention to the University of Virginia. Jacksonian democracy assailed the colleges for their elitism. During Jackson's term of office the federal government showed the power of its support for higher education by withdrawing much of it. The Dartmouth College case of 1816, which preserved the right of private colleges to govern their own affairs and property, without state intervention, put the colleges beyond government control.

But the pressure for new and different subjects, the pressure for a college and university system responsive to the needs of the people and the society continued. Several historical landmarks and societal trends illustrate what was happening in post-Civil War America. It is important to bear in mind that for the most part change occurred outside the mainstream of the college system. According to Rudolph (1962, p. 241), Ralph Waldo Emerson could write in 1867, "The treatises that are written on University reform may be acute or not but their chief value to the observer is the showing that a cleavage is occurring in the hitherto granite of the past and a new era is nearly arrived."

The Civil War ended any doubts about the failure of the American experiment in democracy. It destroyed the

Southern aristocracy and highlighted the significance of the industrial North and the growing importance of the Mid-West. The shape of America's future could be seen in the factories which had served the cause of the Union; the railroads which were crisscrossing the country centering in the stockyards of Chicago; the iron furnaces of Pittsburgh; or in the oil refineries of Cleveland. In the ferment of change following the War innovative people in higher education seized the initiative to respond to the Yale Report of 1828 "...the way that John D. Rockerfeller seized it in oil, Andrew Carnegie in steel, Washington Duke in tobacco" (Rudolph, 1962; p. 245). Often enough the innovative educators used the money of the great men of wealth to accomplish their purposes.

Perhaps the major force for change was the continued rise of science and its practical usefulness in the life of the country. In 1861 the Massachusetts Institute of Technology was chartered by the General Court of Massachusetts. By 1897 it enrolled 1200 students studying science without being forced to first acquire a knowledge of Greek and Hebrew. In contrast, when it was discovered that a professor at Amherst was forcing his students to dissect clams the course was turned over to another who was not interested in such nonsense as an empirical science of biology.

The scientific course of study implemented at the United States Military Academy at West Point had already proved its usefulness in the War. But at Yale or Harvard

students interested in the important developments in engineering or chemistry were required to study at the Sheffield or Lawrence Scientific schools and were awarded a new, inferior degree - the B.S. Thus, the purity of the B.A. was "preserved" and the new scientific students were regarded as inferior and treated with condescension.

Out of the Morrill Federal Land Grant Act of 1862 would come the institution which would change America's view of the college experience. The Morrill Act was an attempt to bring to American agriculture the practical usefulness of science and technical training. In Europe science had contributed to the efficiency of agriculture; Morrill hoped it could do the same in the United States. His bill, of course, would dispose of surplus government land, develop a scientific agriculture and earn Morrill votes among the farmers. The major private colleges sensed the threat and opposed the new colleges at every turn. Even within the new land grant schools there would be debates between those who opposed the provision of technical education and those who wanted only a practical course of study. A trustee at the University of Missouri warned "...too much in practical education should not be expected, as the main purpose is to develop the social and mental nature of the students. "That is good," retorted a member of the state board of agriculture, "but what are they going to do about hog cholera?" (Rudolph, 1962; p. 256).

In 1869 Charles William Eliot was appointed the president of Harvard College only after the corporation forced the board of overseers to reconsider its initial rejection of Eliot. He would serve as President for forty years, destroy any semblance of the classical curriculum at Harvard, establish Harvard as one of, if not the greatest universities of the United States, and contribute to the reform of American higher education. Eliot's platform was the elective principle. A young man of twenty ought to know what he wants to study, select it himself from a broad curriculum and become a useful and enthusiastic citizen. In large measure Eliot's reforms were an attempt to provide student motivation and relieve the tedium of the classical curriculum. He succeeded, and others followed across the country.

Some institutions rejected election. Others, like the Midwestern land grant colleges, welcomed it, as did the schools with declining enrollments who could within its sanction offer an infinitely broad range of subjects to entice their freshmen. Science was welcome in this curriculum, as was engineering, and almost anything else that a student might want, to become an "enthusiastic citizen and worker."

> The elective principle was the instrument by which departments of knowledge were built, by which areas of scholarly interest were enlarged, and therefore it was the instrument that enabled colleges to become universities. In the end, it was the instrument, secular and democratic that permitted the American University to enter into a vital partnership with the society of which it was a part. It transformed the English College in America by grafting upon it German ideals and in the process created the American University (Rudolph, 1962; p. 305).

Since it is in the development of the American university that the roots of the community-junior college can be found we can briefly examine this institution. At Cornell University the land grant idea achieved respectability under the direction of its first president, Andrew D. White, with the benefaction of Ezra Cornell. Cornell was animated by White's famous statement: "I would found an institution where any person can find instruction in any study." Cornell envisioned a trade school while White wished to train "captains in the army of industry." (Rudolph, 1962; p. 266). Election reigned supreme at Cornell, all courses of study were equal, and a spirit of free inquiry prevailed.

At Johns Hopkins, Daniel Coit Gilman prepared to develop the first major American University patterned after the German model. The faculty and knowledge came first at Johns Hopkins. The stated purpose of the university - services to the community - became "the acquisition, conservation, refinement, and distribution of knowledge," (Rudolph, 1962; p. 272). The university's purposes were intellectual. There was little or no concern for the personal development of students. They were there to learn from the faculty. If they could not or would not learn, they must leave. The knowledge acquired by the faculties' research would both directly and indirectly benefit the society, but it was the intellect, the knowledge, that was paramount. The university, as Gilman saw it, pursued the search for truth. The old

college knew the truth and disseminated it to the young. This spirit caught on at the state universities.

The spirit of the new university, its pursuit of knowledge, was grafted from the Germanic idea of the university. The teachers professed their knowledge to students willing and capable to learn. In Germany many of these students were considerably older than the nineteen and twenty-year olds who came to the American college or university. In fact, it was soon discovered that many of the students were not prepared, not capable of handling the complexities of what we might now refer to as upper division studies.

At the University of Chicago William Rainey Harper in 1892 inaugurated a solution. He proposed that the first two years of collegiate education be a continuation of high school at first called the "academic college" and later the "junior college," as opposed to the "university college" later the "senior college." The junior college would be preparatory and remedial. Those students who were competent might go on to the university. Those who were not able to master the essential academic skills could take their places more usefully in society with a sound basic education. It is sufficient to note here that Harper's persuasive powers led to the acceptance of his educational formulas by a committee of Mid-western elementary school, high school, and Mid-western university spokesmen, despite the opposition of Harper's own faculty committee.

By 1921 there were 207 junior colleges (Thornton, 1960). In 1922, the newly formed American Association of Junior Colleges defined the junior college as "an institution offering two years of instruction of strictly college grade." These colleges were the outcome of the development of the American university and a development of the continuing trend to democratize American education. Almost from the outset they participated in the attempt to provide education which would be useful and practical as might be expected of the step-child of the land-grant college (Thornton, 1960). Despite the fact that the following definition of a junior college appeared in 1930, few writers anticipated its almost unparalleled growth after World War II, and its emergence as a community college:

> A fully organized junior college aims to meet the needs of a community in which it is located, including preparation for institutions of higher learning, liberal arts education for those who are not going beyond graduation from the junior college, vocational training for particular occupations usually designated as semi-professional vocations, and short courses for adults with special interests (Ricciardi cited by Thornton, 1960; p. 53).

In this brief review of the historical context of American higher education we can see a gradual change in the answers to such questions as Who should go to college? What should they learn? Why should they learn what they learn? The original American colleges were for only the elite society. They would learn the sacred truths accumulated from classical scholarships and the Christian religion to produce clergy and political leaders. Such an elitist view had to

receive heavy criticism in a revolutionary society dedicated to egalitarian ideal. The pressures of the development of science, industry, and an expanding frontier, eroded the classical college and the classical curriculum. With the rise of the university, and particularly the land-grant college, a new definition of the function of higher education would emerge. An educational system devoted to practical utility and the expansion and refinement of knowledge would take its place. Everyone would be educated who could or would, with the less competent intellectually terminating their education with high school or junior college. But the post World War II period would see a broadening of even this notion to include something unique in the extension of collegiate educational opportunity.

CHAPTER II

THE COMMUNITY COLLEGE AND ITS STUDENTS

In 1947 President Truman's Commission on Higher Education after noting that about half the population had the mental ability to complete 14 years of schooling said (Medsker, 1960; p. 9):

> As one means of achieving the expansion of educational opportunity and the diversification of educational offerings it considers necessary, this commission recommends that the number of community colleges be increased and that their activities be multiplied.

Apparently they went forth and multiplied in response to this almost biblical injunction. Less than ten years later another presidential commission could report (Medsker, 1960; p. 9):

> The expansion of the "2-year college" has been one of the most notable developments in post-high school education in twentieth century America.

This unparalleled growth has been commented on by almost all recent writers on the two-year college (Blocker, Plummer, and Richardson, 1965; Clark, 1960; Cross, 1971; Fields, 1962; Gleazer, 1968; Medsker, 1960; Monroe, 1972; O'Connell, 1968; Ogilvie and Raines, 1971; Thornton, 1960). For a period of time in the 1960's Gleazer (1968) related that at least one community college opened its doors each week.

The impetus for this dramatic expansion of educational opportunity was, as has already been pointed out, a revolt

against aristocratic philosophies of colleges and college admissions. The historical events discussed above and in the preceding chapter document the rise of meritocratic philosophies of higher education. These philosophies suggest that anyone with talent and motivation should be able to receive a college education. According to Cross (1971) this historical perspective reached its peak in the 1950's. In this chapter the nature of the community college and its students is examined. In addition, an alarming situation developing in the two-year college segment of higher education is also examined.

The Community College: Philosophy, Purposes, and Curriculums

Writers on the community college appear to share a consensus concerning the philosophy, purposes, and curricular programs of the community college. The discussion which follows, then, represents a synthesis of the major ideas developed by the writers previously cited.

Underlying the community college development is the historical theme which extends back to the ideas of the original founders of colleges in America - in a democratic society an educated citizenry is the sine qua non. The founders of colleges focused their attention on producing well-educated political leaders. However, the development of public education generally, in the colonies, revolved around the notion that a free and constitutional government required citizens who could at least read and write.

Initially, even this limited goal must have appeared as an impossibility. Certainly nothing in the European experience foreshadowed that the Americans would extend first elementary school and then high school education to almost all their citizens. It certainly appears consistent that as the society became more complex, technological, and complicated there would be a tendency to extend this opportunity beyond high school to higher education. Thus, one underlying basis of the community college is the democratic necessity of an educated citizenry.

Paralleling this purpose has been the theme of individual development. The worth of the individual is and has been a constant theme in American ideology. It is thus hardly remarkable that offering each individual an opportunity to grow and develop to the extent of his ability is seen not only as a benefit to society but a basic philosophical injunction. As a corollary it follows that we recognize that people are different; that they have differing abilities and aptitudes; and some provision must be made for the range of potential extant in the population.

This assumption, that every individual has worth and abilities, leads to a profoundly different orientation to the education of post high school students. Many upper division colleges and universities pride themselves on the nurturance of only one of the many possible human abilities, the cognitive or intellectual. Philosophically the community college rejects a narrow focus on intellectual compe-

tence as opposed to, or at the expense of, the numerous other abilities to be developed in students. It seeks to develop as many abilities as the society needs or the individual wants. The needs for the recognition of and the development of the facets of the personality other than the intellect has been amply documented by Gardner (1961) and Sanford (1969). Following the tradition described by Hutchins (1936), some argue that the development of the intellect is all there is to college. Philosophically the community college rejects this argument. Empirically, studies, such as the voluminous The American College (Sanford, N., Ed., 1962), clearly indicated that colleges and universities do much more. One can only reiterate that philosophically the community colleges aim to develop competencies in many spheres of the personality and conclude with Gardner (1961, p. 86):

> An excellent plumber is infinitely more valuable than an incompetent philosopher. The society which scorns excellence in plumbing because plumbing is a humble activity will have neither good plumbing nor good philosophy. Neither its pipes nor its theories will hold water.

With such a philosophical base it is not difficult to extrapolate the admissions and curricular policies of the community college. The admissions policies of most community colleges are simple - admit anyone over 18 who can profit from the types of instructional programs offered. This policy does not guarantee that every student will succeed in every program in the community college. But it does allow the student the opportunity to try those programs of

instruction that he thinks will benefit him or herself.

It follows that diversity of curricular offerings must be the rule rather than the exception. Since the community college accepts the notion that almost everyone is educable beyond high school, that this is useful to society and to the individual, most community colleges offer a wide range of programs. These range from the traditional first two years of any college, usually referred to as the transfer program, through business programs or programs in occupational specialties which are needed in the community.

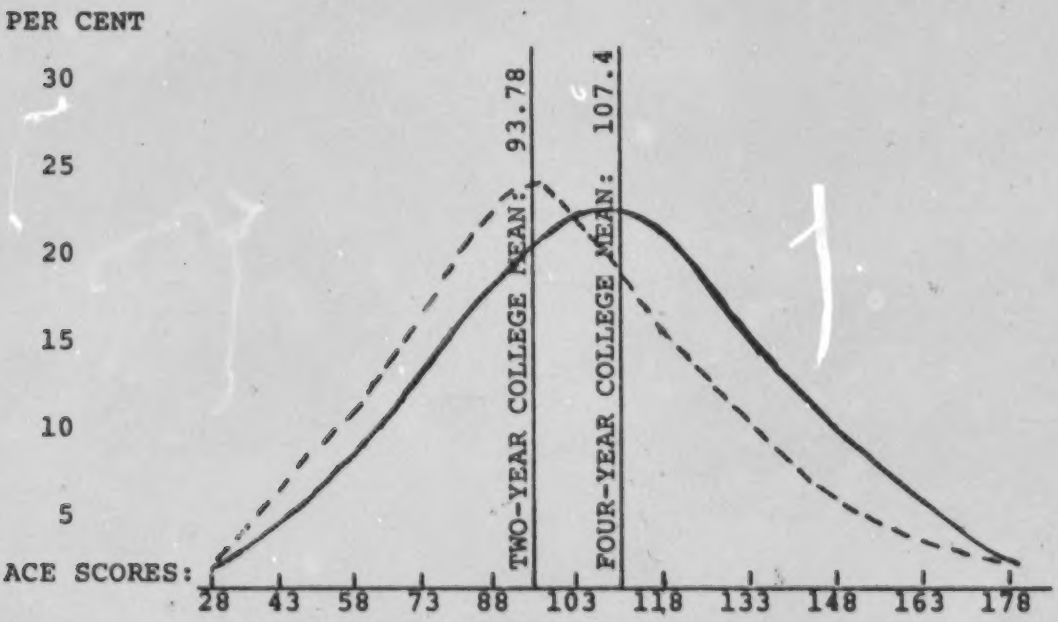
Since the community college attempts to offer a diversity of curricular programs to meet both student and societal needs, it follows that appropriate counseling and guidance are of great importance. Students often are unaware of their strong or weak points, and though their freedom of choice is clearly significant, intelligent choices require appropriate information. Thus, the counseling and guidance functions in community colleges take on added significance.

The counseling responsibility is manifold. The students must be informed of the program offerings and the nature of the aptitudes and skills necessary to successfully complete these programs. In addition, they must have some realistic information about their own skills and competencies and opportunities to make up for or learn new skills where appropriate to their needs and choices.

The nature of the community college and its student also requires faculty who, as opposed to upper division faculty, are primarily concerned with teaching. Thus, community colleges need good teaching and justifiably emphasizes this over other faculty responsibilities. With excellent instruction the diverse body of students who make up the community college may be able to learn and develop, whereas they initially might fail dismally in the more competitive university environment. We can now turn our attention to the nature of the community college student.

The Community College Student Circa 1960

Figure 1. Overlap in ACE Scores of Freshmen Entering Two-year and Four-year Colleges. Four-year Colleges_____ Two-year Colleges--------



SOURCE: A study completed by the Center for the Study of Higher Education of students entering 200 colleges and universities in 1952.

The characteristic of community college students most often discussed in the literature was academic aptitude. Writers often initially pointed out the data presented by Medsker (1960), reproduced in figure 1, showing that two-year college students have generally lower aptitude than four-year college students. It is then hastily added that the overlap between the distributions is great, and the conclusion that two-year college students have significantly less academic aptitude is essentially unwarranted. In addition, it was often noted that there are aptitudes other than intelligence present in the two-year college sample that contribute to success in various activities. Writing in this vein Thornton (1960, p. 148) said:

> The unwary reader may form the impression that all members of the former group are more apt for college than any members of the second group. This conclusion is almost always unsupported by the data. Again, it is easy to assume that these limited tests of "college aptitude" are tests of "intelligence." Yet psychologists are becoming increasingly aware that intelligence is not a unitary trait; rather, in any individual, "intelligence" is the result of a unique combination of aptitudes. Not all these combinations are predominantly either numerical or verbal; there are other significant and identifiable aptitudes which contribute to success in many activities, even though their contribution to traditional university learning may be comparatively slight. The universities and liberal arts colleges are comparatively uninterested in these other kinds of intelligence; their sphere of learning is the abstract and theoretical, expressed in verbal and numerical symbols. The community-junior college shares this interest, so important to the "transfer" part of its curriculum, but it is interested also in other more practical aptitudes which may exist somewhat independently of verbal and numerical aptitudes. College aptitude tests do not measure all the human aptitudes important to the work of the community-junior college.

Thornton (1960, p. 148) suggested that the following conclusions, taken from a classic study done at the time by Seashore, are warranted:

> How do junior college freshmen compare with senior college freshmen? It is not surprising to find that junior college freshmen generally are not as able in the areas measured by CQT as the four-year or senior college freshmen. The following statements seem reasonable:
>
> The median score for junior college freshmen is near the 25th percentile for senior college freshmen.
>
> About 24 per cent of junior college men and 20 per cent of junior college women are above the respective medians for freshmen in four-year colleges.
>
> There is a considerable overlap of scores. These distributions tell us that there are many junior college students whose scores would be considered superior in senior colleges, and many low-scoring senior college freshmen would also rate low in junior colleges.
>
> The difference in favor of the four-year student is slightly greater for women than for men.

Several other characteristics of community college students are worth mentioning. Many of the community college students were older than those at four-year colleges. They frequently enrolled in the community college with the intention of transferring to a four-year college to seek the bachelor's degree. Despite this fact only a small minority, 33 per cent, (Medsker, 1960; p. 91) of entering students did actually transfer. In addition, only 12 per cent obtained the bachelor's degree in four years (Trent & Medsker, 1968). Thornton (1960, p. 153) suggested the following reasons for this state of affairs:

> The reasons for the unrealistic educational ambitions of other students are many: there is the American dream that higher education is the right of every

> youth who will try hard enough. There is the selective function of the junior college which encourages the student to test himself in college work with comparatively low financial outlay. There is the paucity of vocational offerings in some junior colleges, so that the student has little choice other than a transfer program. Beyond these reasons lies the failure of community junior college workers to explain, early and often, to high-school students and to their parents, the purpose and nature of occupational education in the junior college. Lacking such information, students gravitate unwittingly toward the traditional and prestige-bearing transfer program. Until effective counseling procedures are developed to enable students to choose a college objective more intelligently than they do, a large part of the efforts of the community junior colleges will be dissipated on students with unrealistic objectives.

It is worth noting the overwhelming push toward transfer programs despite the community college's philosophical commitment to diverse forms of excellence and the development of aptitudes other than the intellectual. According to Monroe (1972) there was typically a three-to-one ratio in favor of transfer programs. Both faculty and students appeared to hold attitudes favoring the transfer curriculum over any other.

Large percentages of community college students work part-time or full-time to earn support for the college experience. It is interesting in this context that most of the writers on community colleges cited early in this chapter noted that while some of the students in community colleges come from lower socioeconomic groups, often up to 60 per cent of the students in community colleges came from middle or upper class background. Jencks and Riesman (1969) were perhaps the first writers to attempt to make some sense

out of such statistics. They suggested that the community college had become a haven for the less qualified members of the white middle and upper classes rather than actually benefiting the socioeconomic groups for which the community college philosophically was designed. Monroe (1972, p. 184) supported this conclusion.

Dropout and withdrawal were perceived by writers concerned with the community college as a serious problem. According to figures in the Junior College Directory of 1957, 1958, and 1959 over 50 per cent of the students who entered dropped out (Thornton, 1960; p. 156-157). The reasons were:

> Age seems to be a significant factor in this analysis. While 14 per cent of the school population were over 25 years of age, 27 per cent of the dropouts were above that age. . .
>
> Approximately 75 per cent of the total number of dropouts were made up of first-and second-semester students.
>
> For every 100 full-time students who enter Orange Coast College for the first time in September, the best estimate will be that 39 will drop out before the school year ends, 15 will not return for the third semester, 11 will drop out during the second year, and 35 will graduate.
>
> One-third of the dropouts seem to be due to some extent to a failure of the college, while the balance seems to be justifiable. A more careful analysis should be made in an effort to learn the real reason for each withdrawal. This would necessitate tracing and obtaining an exit interview with those individuals who fail to complete a formal withdrawal. The largest group of withdrawals here classified as "unjustified" includes those who are dropped because they no longer attend classes. The college may not have failed with all of these. Follow-ups might determine that these dropouts occur for "justifiable" reasons - financial need, permanent jobs, or the like.

Even in 1941 some writers were suggesting that some type of clinical counseling would be necessary to lower such drop-out rates (Amori, 1941).

As of the early 1960's then, we can conclude that the two-year college student was in general less qualified academically than his four-year college equivalent. He was slightly older yet still overwhelmingly interested in the transfer program, despite the fact that the community college sought to develop other than academic skills. Despite interest in such programs, only a minority would actually transfer to the four-year school. In addition, many two-year college students would never graduate at all. Interestingly, there was some evidence available that the community college was not performing the function of educating the whole spectrum of socioeconomic groups but was, in fact, becoming a haven for less qualified middle and upper middle class children.

The Contemporary Reassessment: What's Behind the Open Door?

In 1971 Cross could note with some justifiable pride that a new era had finally dawned in American higher education. It was now possible to conclude for the first time that the promise of almost universal higher education was being achieved. Blacks and other ethnic and racial minorities were entering higher education in increasing numbers, but another group, labelled by Cross as the "New Students," were the predominant newcomers to higher education.

The new student, who is currently entering institutions of higher education, particularly community colleges, in tremendous numbers is a product, according to Cross (1971), of the egalitarian philosophy which suggests that in answer to the question "Who should go to college?" we must respond "Just about everyone." Cross (1971) cited data which she suggests represents a low estimate of the per cent of high school students planning to go on to higher education. The figure is 61 per cent. In states where access to higher education is very open, the number of students going beyond high school was proportionately greater, 80 per cent in California, for example. Astonishing as it may be, Cross (1971) argued that we are rapidly approaching the era of universal higher education.

The major distinguishing characteristic of these "New Students" was their undistinguished academic ability. Cross (1971, p. 15) offered this concise description:

> Most of the New Students described in this book are Caucasians whose fathers work at blue-collar jobs. A substantial number, however, are members of minority ethnic groups. Most of the parents have never attended college, and the expectation of college is new to the family. The New Students themselves have not been especially successful at their high school studies. Whereas traditional college students (upper third) have made A's and B's in high school, New Students have made mostly C's. Traditional students are attracted primarily to four-year colleges and universities, whereas New Students plan to enter public community colleges or vocational schools.
>
> Fundamentally, these New Students to higher education are swept into college by the rising educational aspirations of the citizenry. For the majority, the motivation for college does not arise from anti-

> cipation of interest in learning the things they will be learning in college but from the recognition that education is the way to a better job and a better life than that of their parents.

Operationally, the new students were those who scored in the lowest third of traditional tests of academic ability (Cross, 1971; p. 13).

As a result of this new type of student, colleges, particularly the community colleges, are faced with a dilemma of growing magnitude. They admit students who overwhelmingly opt for the transfer curriculum, for which they do not usually have the requisite skills. As noted from the previous discussion, this is clearly not a new problem but the level of student aptitude is declining and magnifying the problem considerably. Provision for this is frequently made by providing students with courses of study suited to their abilities. But an overwhelming majority of students still seek the traditional liberal arts education which they have come to associate with "really" going to college.

As a result of this situation, some writers were extremely critical of the community college. The general tenor of much of this criticism is that the community college is in reality a second rate institution, educating the academically inferior, in a watered-down version of the four-year college (Monroe, 1972). For example, Monroe (1972, p. 18) cited Jennings, one critic of community colleges, who said:

> The community-junior college is a kind of alchemist's universal social solvent. It can wash away

> the base metal and expose the golden gleam in every man. It can remove the blotches and blots and hindrances that distort or prevent learning, making it possible for every man to know what he needs to know to be what he wants to be. The community college presumes to be the new and necessary social invention that will articulate into the social structure and convert our disorderly and often hurtful society into a pervasive responsive learning environment.

Lynes (1966, p. 59), another critic, was perhaps more blunt:

> In general it (the community college) has been looked down upon by holders of B.A. degrees as a refuge of the stupid, and it has been avoided as a place to teach by most serious scholars as having no academic status and offering no intellectual companionship. For the socially ambitious it is a limbo better not discussed.

Jencks and Riesman (1969), described the community college as a pale copy of the four-year college. They suggested it is a second rate institution, not an alternative model for higher education. They suggested further that it is neither innovative nor novel, but rather a safety valve for the better schools allowing the "universities to go their own way without facing the full consequences of excluding the dullwitted or uninterested majority" (Jencks & Riesman, 1969; p. 492).

The challenge faced by professionals in the community college is to do something about this situation (Cross 1971) if the community college is not merely to become a dumping ground of the unfit or a safety valve. We must help these students who wish the transfer option to acquire the academic skills and competencies which they lack. Cross, (1971) documented that while attempts at remediation have not been remarkably successful with these students, new methods for

teaching skills and dealing with the general issue of behavior change have been developed. The next chapter explores some of these methods and determines if the technology to go beyond the open door is present.

CHAPTER III

A SURVEY OF SOME RECENT APPROACHES TO BEHAVIOR CHANGE

In this chapter an attempt is made to summarize some recent efforts to change people's behavior. Such attempts have usually been summarized under the rubrics of therapy or counseling, most often the latter in academic settings. Attempts at behavior change, until quite recently, owed a significant debt to the work of Sigmund Freud and his adherents. Beginning with his use of hypnotherapy, which proved ineffective for Freud, and extending over a very productive career utilizing his own technique of psychoanalysis, he contributed greatly to our understanding of human behavior and behavior change. Despite the widely acknowledged contributions, however, psychoanalysis and the various forms of dynamic psychotherapy which are its offshoots have been heavily and frequently criticized.

The most often cited attack on dynamic psychotherapy was the study published by Eysenck (1952) and extended and refined on several occasions (Eysenck, 1961; 1965; 1966; 1967). In this now famous investigation, Eysenck concluded that psychotherapy for neurotics, the major sample of interest, was no more effective than no treatment at all. The facts of the matter were aptly described by one investigator

(Astin, 1961, p. 65) as follows:

> Once upon a time there was a method for treating mental problems called psychotherapy. Those who were around when it first came into vogue may remember that its principal purpose was to provide a service to troubled people who had asked for help. This function was, in fact, psychotherapy's raison d'etre. After people began to use this method, however, evidence of its efficacy was unimpressive and skepticism was advanced regarding whether it was really fulfilling its purpose. As had usually been the case with other treatment methods of similarly dubious values, psychotherapy should have died out. But it did not. It did not even waver. Psychotherapy had, it appeared, achieved functional autonomy.

The conclusion that these initial approaches to behavior change did not work is still debated (for a comprehensive summary of the issues see Bergin and Garfield, 1971). It is now, however, acknowledged that dynamic therapy is not a practical or useful approach to psychotherapy and behavior change. As a consequence of this conclusion, considerable attention has been focused on a search for new methods to change behavior. In the process the focus of therapy has shifted from techniques which are expensive, time consuming, and dependent on a high level of verbal and intellectual skill on the patient's part, to techniques which are inexpensive, fast, and applicable to a wider range of people (Bergin and Garfield, 1971).

We are thus faced with an interesting convergence of need and method. We have seen that American Higher education has moved in the direction of almost universal higher education. A direction undreamed of by philosophers and administrators of higher education just 50 years ago has

placed in our colleges, particularly our community colleges, students in serious need of practical methods of behavior change. At the same time a technology of behavior change is being developed, assessed, and employed in a wide range of settings from schools and businesses to mental hospitals (Skinner, 1953; 1971; Ullmann and Krasner, 1969; Wolpe, 1958; 1969).

From the educator's position it would seem critical to develop an awareness of the methods which might be of use in helping students develop skills which they need and want. In the pages that follow, a brief description of some of the major new methods of behavior change are presented.

Methods of Behavior Change: Behavior Therapy and/or Behavior Modification

Despite the fact that there are many different techniques which fall within the heading behavior therapy or behavior modification, there are only a few major principles involved. Almost all of these principles are derived from contemporary learning theory in psychology, particularly from the study of classical and operant conditioning. Ullmann and Krasner (1969) suggested that though classical conditioning, operant conditioning, learning, generalization, extinction, discrimination, reward, punishment etc., are all involved, such phenomena do not define the various behavior therapies. Rather, they suggested as a definition: "behavior therapy can be summarized as involving many procedures that utilize systematic environmental contingencies to alter

directly the subject's response to stimuli" (Ullmann and Krasner 1969, p. 250).

Two points concerning the definition are worth emphasizing. First, the behavior therapist attempts to arrange the environment of the patient in a systematic way so as to alter the person's behavior. Second, the behavior therapist is not simply concerned with removing a patient's undesirable behavior, although this is of course part of the process. He is just as interested in replacing the patient's undesirable behavior with more appropriate, more adaptive, more useful behavior. Table 1 adapted from Franks (1969, p. 5) summarizes the major characteristics of psychodynamic therapies versus behavior therapies.

TABLE 1

TABULATION OF THE MORE IMPORTANT DIFFERENCES BETWEEN PSYCHODYNAMIC THERAPIES AND BEHAVIOR THERAPY

Psychodynamic Therapies	Behavior Therapy
1. Based on inconsistent theory never properly formulated in postulate form.	1. Based on consistent properly formulated theory leading to testable deductions.
2. Derived from clinical observations made without necessary control, observation, or experiments.	2. Derived from experimental studies specifically designed to test basic theory and deductions made therefrom.
3. Considers symptoms the visible upshot of unconscious causes ("complexes").	3. Considers symptoms unadaptive CR s. (conditioned responses).

TABLE 1-Continued

Psychodynamic Therapies	Behavior Therapy
4. Regards symptoms as evidence of repression.	4. Regards symptoms as evidence of faulty learning.
5. Believes that symptomatology is determined by defense mechanism.	5. Believes that symptomatology is determined by individual differences in conditionability and autonomic ability as well as accidental environmental circumstances.
6. All treatment of neurotic disorders must be historically based.	6. All treatment of neurotic disorders is concerned with habits existing at present; historical development is largely irrelevent.
7. Cures are achieved by handling the underlying (unconscious) dynamics, not by treating the symptom itself.	7. Cures are achieved by treating the symptom itself, i.e., by extinquishing unadaptive CR s and establishing desirable CR s.
8. Interpretation of symptoms, dreams, acts, etc., is an important element of treatment.	8. Interpretation, even if not completely subjective and erroneous, is irrelevent.
9. Symptomatic treatment leads to the elaboration of new symptoms.	9. Symptomatic treatment leads to permanent recovery, provided autonomic as well as skeletal surplus CR s are extinquished.
10. Transference relations are essential for cures of neurotic disorders.	10. Personal relations are not essential for cures of neurotic disorders, although they may be useful in certain circumstances.

Systematic Desensitization

The most widely known and utilized behavior therapy technique is systematic desensitization. This successful technique, pioneered by Joseph Wolpe is based on two principles. The first is the principle of reciprocal inhibition: "If a response inhibitory of anxiety can be made to occur in the presence of anxiety evoking stimuli, it will weaken the bond between these stimuli and anxiety. The second principle is that stimulus generalization will occur from the learning involved in the therapeutic situation" (Agras, 1972, p. 132).

The process itself is made up of these procedures. First the subject is taught a technique of relaxation. Wolpe (1958; 1969) recommended an abbreviated version of the progressive relaxation method suggested originally by Jacobsen (1938), although hypnosis or drugs have also been utilized. In a series of interviews the patient is taught to relax the muscles of his body to attain a state of calm and relaxation. For example, Wolpe (1969) suggested beginning with the patient's arms, and to give the reader a feel for the procedure a quote from Wolpe (1969, p. 102) is appropriate.

> I am now going to show you the essential activity that is involved in obtaining the relaxation. I shall again ask you to resist my pull at your wrist so as to tighten your biceps. I want you to notice very carefully the sensations in that muscle. Then I shall ask you to let go gradually as I diminish the amount of force exerted against you. Notice, as your forearm descends, that there is a decreasing sensation in the biceps muscle. Notice also that the letting go is an activity, but of a negative

> kind--it is an uncontracting of the muscle. In due course, your forearm will come to rest on the chair, and you may think that you have gone as far as possible-that relaxation is complete. But although the biceps will indeed be partly and perhaps largely relaxed, a certain number of its fibers will stand, in fact, be contracted. I shall therefore say to you, "Go on letting go. Try to extend the activity that went on in the biceps while your forearm was coming down." It is the act of relaxing these additional fibers that will bring about the emotional effect we want.

All the muscle groups in the body are relaxed in turn using similar instructions.

During the initial interviews with the patient, but not while the relaxation training is being carried out, anxiety hierarchies are constructed. "An anxiety hierarchy is a list of stimuli on a common theme (in the case under discussion test anxiety) ranked in descending order according to the amount of anxiety they evoke" (Wolpe 1969, p. 197). Items for a hierarchy come from a variety of different sources, from interviews concerning the patient's history, from standardized questionnaires, and from the patient himself.

After the patient has been trained in relaxation and the hierachy prepared, the items on the hierarchy and relaxation are systematically paired. First deep relaxation is initiated and then the subject is presented with an item from the hierarchy either in real life (in vivo) or in the patient's imagination. The patient is instructed to signal, usually by lifting his finger, if he experiences anxiety, Assuming all goes well, the therapist proceeds up the hierarchy. The procedure is summarized as follows:

> Systematic desensitization is the breaking down of neurotic anxiety-response habits in piecemeal fashion. A physiological state inhibitory of anxiety is induced in the patient, who is then exposed to a weak anxiety arousing stimulus. The exposure is repeated until the stimulus loses completely its ability to evoke anxiety. Then progressively 'stronger' stimuli are introduced and similarly treated (Wolpe 1969, p. 91).

It is widely agreed in the therapeutic literature that systematic desensitization is an effective procedure for the elimination of test anxiety (Mann, 1972; McMillan and Osterhouse, 1972; Osterhouse, 1972; Wine, 1971). The specific aspects of this procedure which contribute to its effectiveness remain to be delineated.

Assertiveness Training

Some individuals become anxious in situations which prevent them from doing or saying what is logical and correct in the situation. Such individuals are often described as passive or unassertive. The inhibition of feeling may lead to considerable internal anxiety or unhappiness and, in addition, such subjective emotion may lead to a variety of psychophysiological disturbances, e.g., ulcers, chronic skin reactions, etc. Thus Wolpe (1958; 1969) and others (Agras, 1972; Lazarus, 1972; Ullmann and Krasner, 1969) recommended assertiveness training.

Assertiveness training frequently consists of a combination of systematic desensitization to reduce the anxiety associated with specific situations, and training in how the patient should behave in situations which call for asserting himself. Frequently the therapist may act out a role of a

person with whom the patient has difficulty asserting himself. The therapist may then act out several different roles each involving increasingly more assertive behavior on the part of the patient.

A patient who is shy in asking girls for dates might, for example, be given a script by the therapist (Ullmann and Krasner, 1969) who would then interact with the therapist over the phone with the therapist deviating more and more from the script until the subject learns to improvise. The patient might then role-play talking with a female therapist in person and then might proceed to role-play various dating tactics.

Positive Reinforcement and Extinction

Since most behavior therapies revolve around the notion of learning, it is not surprising that attempts to reward appropriate behavior and extinguish inappropriate behavior have been frequently utilized. In a positive reinforcement situation the behavior to be reinforced is first carefully defined and its frequency of occurrence measured. Reinforcements are then identified, e.g., food, cigarettes, social attention, etc. The variety of possible reinforcers is essentially unlimited, but it is important to identify those reinforcers that are relevent to the individual in question and that can be readily controlled by the therapist and/or patient during the course of therapy. Next, conditions must be arranged so that the desired behavior is produced, or if the behavior is not in the patient's repertoire,

then it must be shaped. Finally, by appropriate reinforcement schedules, the behavior might be strengthened so that the behavior will be maintained.

An example from Agras (1972, p. 32-33) illustrates the use of such a procedure in the case of a hospitalized patient:

> The first problem chosen to work on was his avoidance of social interaction. The target behavior was therefore defined as self-initiated conversation with nursing staff outside his room. During three 90 minute sessions each day, one or more nurses were made available for the patient to approach. They were instructed not to initiate conversation and simply to respond appropriately to his attempts at talking with them. Once the target behavior was defined, an ongoing measure of it was made by having the nurses time by stopwatch the duration of each of his conversations with them, so that a daily total for the three sessions could be plotted. During a baseline period he was instructed at the beginning of each session to talk as much as possible with the nursing staff, this did not meet with much success.
>
> The second step was to find a reinforcer. Observation of the patient revealed that he enjoyed leaving the ward and sitting in the lobby hospital "watching the world go by," listening to the radio, and watching television. It was decided to use the opportunity to do these things as reinforcement. He was told that every 2 minutes that he talked with a nurse during the three daily sessions would earn him a token exchangeable for 5 minutes of any of the above-mentioned activities, which he would otherwise not be allowed to engage in. The similarity of this procedure to a job was pointed out to him, an analogy which he appeared to accept, and which may have been important in avoiding a hostile reaction to the deprivation of these pleasurable activities. The token was given to him by the nurse after each 2 minutes of talking, providing immediate reinforcement for the target behavior.
>
> The effect of this procedure was dramatic. To prove conclusively that contingent application of reinforcement was responsible for the therapeutic effect, a control procedure was instituted for the next few days. During this period the patient was given 25 tokens (which had been the highest amount earned)

> every morning; that is, no response was required from him in order to obtain reinforcement. After a brief spurt his conversational ability showed a steadily declining trend during this phase, demonstrating that it had been under the control of the reinforcement procedure. Then, in the final phase the original procedure was reinstated, giving rise to a further increase in conversational ability.

The process of extinguishing undesirable responses proceeds in a similar fashion, but the removal of the reinforcer is the object of the procedure. The assumption is that once the reinforcer on which a behavior is dependent is removed, the behavior will also disappear. Such a procedure would usually be used in association with an attempt to reinforce desirable behavior to replace the behavior undergoing extinction.

Aversive Procedures

As might be expected, there are situations in which positive reinforcement or extinction procedures cannot be used. In such cases the pairing of an unpleasant stimulus with the maladaptive behavior might be employed (Agras, 1972; Rachman and Teasdale, 1969; Ullmann and Krasner, 1969). In the case of an alcoholic, for example, the sight or smell of alcohol might be paired with an electric shock. This classical conditioning procedure theoretically would lead to the once pleasurable stimulus (alcohol) becoming associated with the unpleasant stimulus (shock). Alternatively, alcohol ingestion could be followed by some negative consequence such as vomiting. This result has been obtained by using drugs which when combined with alcohol cause vomit-

ing and nausea. Thus, through punishment, the frequency of drinking, or some other target behavior, would decline.

As with positive reinforcement procedures careful definition of the behavior to be eliminated is necessary, also careful measurement of the behavior frequency prior to therapy, and assessment of the effects of the manipulation of the aversive stimulus. In addition Cautela (1967) has demonstrated that aversive procedures applied in the subject's imagination, a procedure labelled covert sensitization, is also effective in eliminating undesirable behaviors.

Flooding or Implosion Therapy

Flooding or implosion therapy (Agras, 1972) might be described as rapid systematic desensitization. Whereas in systematic desensitization an attempt is made to gradually expose the patient to the anxiety provoking stimulus, during implosion the patient is encouraged to confront immediately and completely the fearful situation, either in reality or in imagination, with the aid of the therapist. The assumption underlying therapy in this area is that direct confrontation with the anxiety producing events and the associated emotional reaction is therapeutic. Part of the underlying rationale is that if the subject keeps experiencing the anxiety situation the emotional response may be eliminated through fatigue.

A description of the use of implosion therapy taken from Ullmann and Krasner (1969, p. 305) follows:

> The experimental group began with scenes such as imagining they're touching a rat, having a rat nibble at their finger, or feeling one run across their hand. Then the rat might bite them on the arm. The Ss might next experience the rat running rapidly over their body. The rodent could pierce them viciously in the neck, swish its tail in their face, or claw about in their hair. It might even devour their eyes.
>
> The Ss might be told to open their mouths. Suddenly, the rodent jumped in, and they swallowed it. The animal then destroyed various organs of their bodies. Perhaps Ss might be locked in a room full of rats, or a man-sized disease-ridden, slimy, gray sewer rat might attack them. The possibilities are innumerable. The therapist knew what scenes generated the most anxiety, and he elaborated upon them.

Token Economies

The token economy can be viewed as an extension of the general principles of behavior modification to group situations, (Ullmann and Krasner, 1969). It involves the specification of the behaviors which are desirable in the given group situation, for example, attentiveness to a teacher in a classroom situation. Secondly, some medium of exchange is obtained that stands for classes of reinforcers; plastic tokens, metal coins, poker chips, etc. Finally, there must be some way for the subjects to utilize the tokens to obtain the reinforcers.

Typically a classroom might be organized so that students are rewarded with tokens for attention to the teacher, intervals of productive activity, e.g., writing in notebooks, completing a homework task. These tokens received may then be turned in at the end of a school day, or at a recess period, to obtain desirable reinforcers.

The classic study in this area was by Ayllon and Azrin (1965) who utilized a token economy in a psychiatric hospital. In their series of investigations patients were reinforced with tokens for performing such behaviors as serving meals, cleaning floors, sorting laundry, washing dishes, and self-grooming. Reinforcers included such things as paying rent for a room; selecting eating companions; receiving passes to leave the hospital grounds; opportunities to speak to ward physicians, psychologists, and other personnel; T.V.; candy; and cigarettes. Remarkable improvements in the behavior of the chronic patients were demonstrated.

Behavior Therapy and Hypnosis

One of the comments frequently made by observers of the various techniques of behavior therapy is that such techniques bear some resemblance to hypnosis (Frank, 1961; Spanos, Barber and DeMoor, 1973; Ullmann and Krasner, 1969). This relationship is highlighted by the fact that particularly in systematic desensitization, hypnosis is often directly employed as a technique of relaxation and an aid in heightening the subject's suggestibility (Wolpe, 1958). Further, definitions of hypnosis highlight the similarity of hypnosis to behavior therapy:

> Without attempting a formal definition of hypnosis the field appears to be well enough specified by the increased suggestibility of subjects following induction procedures stressing relaxation, free play of imagination, and the withdrawal of reality supports through closed eyes, narrowing of attention and concentration of the voice of the hypnotist.

> That some of the same phenomenon will occur outside of hypnosis is to be expected (Hilgard, 1965; p. 160).

Behavior therapy techniques, such as implosion therapy, and other behavior therapy techniques such as covert sensitization, described above, rely heavily on the use of the subject's imaginings during the therapy. And as Hilgard's definition suggested, hypnosis relies on the imagination for its effects. A recent paper by Spanos, et al., (1973) attempted to summarize the parallels which exist between hypnosis and behavior therapy.

First, both behavior therapy and hypnosis usually include suggestions of relaxation despite the fact that both procedures employ relaxation instructions. Spanos, et al., (1973) pointed out that systematic desensitization as well as hypnosis may be effective without such instructions. Thus these authors suggested that although relaxation may be useful in these two procedures, it is probably not a necessary condition for promoting behavior change.

A variable of importance in both procedures, however, is motivation. An extensive series of studies reviewed by Barber (1969) and Barber, Spanos, and Chaves (1974) indicates the subject's response to suggestions is augmented by suggestions aimed at obtaining the subject's cooperation and asking him to try hard. In fact, it appears that instructions, such as those reproduced on the following page, are as effective in increasing response to suggestion as a lengthy hypnotic induction procedure (Barber, 1969; p. 46).

> In this experiment I'm going to test your ability to imagine and to visualize. How well you do on the tests which I will give you depends entirely upon your willingness to try to imagine and to visualize the things I will ask you to imagine. Everyone passed these tests when they tried. For example, we asked people to close their eyes and to imagine that they were at a movie theater and were watching a show. Most people were able to do this very well; they were able to imagine very vividly that they were at a movie and they felt as if they were actually looking at the picture. However, a few people thought that this was an awkward or silly thing to do and did not try to imagine and failed the test. Yet when these people later realized that it wasn't hard to imagine, they were able to visualize the movie picture and they felt as if the imagined movie was as vivid and real as an actual movie. What I ask is your cooperation in helping this experiment by trying to imagine vividly what I describe to you. I want you to score as high as you can because we're trying to measure the maximum ability of people to imagine. If you don't try to the best of your ability, this experiment will be worthless and I'll tend to feel silly. On the other hand, if you try to imagine to the best of your ability, you can easily imagine and do the interesting things I tell you and you will be helping this experiment and not wasting any time.

The attitude and expectancies of subjects concerning their hypnotic performance also appears to be of importance in determining their response to suggestion (Barber, 1969; Barber, Spanos, and Chaves, 1974; Spanos, Barber, and DeMoor, 1973). It has been demonstrated that subjects having positive attitudes toward hypnosis get higher scores on suggestibility measures than subjects having negative attitudes. Similarly, subjects who expect to perform well in hypnotic situations perform better than subjects who do not expect to be able to carry out the suggestions that they receive.

Despite the fact that expectancies and attitudes are also known to be important in determining subject's re-

sponses in conventional therapy, little research has been devoted to assessing these variables in behavior therapies (Spanos, et al., 1973). Despite this fact it seems logical to assume that the expectancies and attitudes of patients undergoing behavior therapies will also be important as they are in hypnosis. In addition, Spanos, et al., (1973) pointed out that behavior therapists typically attempt to produce favorable attitudes and expectancies in their subjects.

In addition to the above similarities another important area of similarity seems to be the kind of thinking and imagining which are produced in subjects, both in hypnosis and behavior therapy (Spanos, 1971; Spanos, et al., 1973). A significant amount of research summarized by Barber, Spanos, and Chaves (1974) demonstrates that the wording of suggestions given to subjects is of critical importance because of the type of imaginal activity to which it gives rise.

When subjects pass hypnotic suggestions it appears that they engage in cognitive activity which Spanos (1971; 1973) has labelled as goal-directed imagery. That is, subjects who pass hypnotic suggestions typically imagine events and situations which, if they really occurred, would produce the behavior suggested. Despite research on this topic in hypnosis, behavior therapists have not systematically studied this problem in behavior therapy (Spanos, et al., 1973). They usually insist, however, that vivid and realistic imagery is essential for the successful outcome of behavior

therapy.

It thus appears that behavior therapy and hypnosis have much in common as techniques to change behavior. Interestingly, there were apparently only two studies which have compared hypnosis and behavior therapy (Gibbons, et al., 1970; and Marx and Gelder, 1966) and these investigations obtained contradictory results.

Conclusion

It has been shown that a variety of techniques loosely labelled behavior therapy offer promising alternatives to conventional dynamic therapy for changing people's behavior. Such techniques subsume a wide variety of procedures and methods which might provide college counseling and professional staffs with the means to help the many new students to higher education develop the skills which they appear to lack. The next chapter outlines a study done to explore these possibilities.

CHAPTER IV

PROBLEM INVESTIGATED AND EXPERIMENTAL DESIGN

Chapter II described the major characteristics of community college students. What was found was that they were in general less academically qualified, less well-off financially, and quite different in their attitudes, motivations and expectations than are their four-year college peers. Many start two-year colleges and never finish. Most individuals familiar with such colleges are aware of the high dropout rate and are very concerned about it.

Students drop out for many reasons; according to Monroe's (1972) recent summary, the significant factors were: academic ability, degree of motivation, and financial ability. Scholastic ability is almost universally seen as the major reason for dropping out of college and is clearly a significant factor. Yet in one study (Trent and Medsker, 1968) it was found that of the sample of dropouts a greater percentage of high ability than low ability students dropped out.

Writers such as Cross (1971), Johnson (1968), Monroe (1972) and others, were convinced that they could help many of these students deal effectively with the academic environment, but only if they were willing to forsake traditional

methodologies and entertain new techniques and technologies. Such students have a number of characteristics which would lend themselves to the behavior modification techniques which were described in the previous chapter. Yet, little research has been done with two-year college students using these procedures (Morrow, 1970).

The present chapter: 1) describes briefly the major characteristics of academically unsuccessful students, 2) describes and reviews one aspect of academic success, worry and concern about taking tests, and 3) describes a study which was performed to assess the effectiveness of several behavior modification techniques on test anxiety.

Underachievement

Psychologists and educators are in agreement that a significant number at all educational levels can be categorized as underachievers (Cross, 1971; Mitchell and Ingham, 1970; Morrow, 1970; Wine, 1971). That is, these students do not do as well in academic situations as might be expected or predicted. According to Morrow (1970, p. 540) this may begin as early as the third grade. Compared with other students, underachievers "...show less effective, persistent, and systematic work habits on academic tasks, instead show incompatible behavior...and more often fail to find academic work rewarding." Underachievers differ from other students in at least four important ways: 1) study habits; 2) study methods; 3) attitudes, interests, and goals; and 4) the amount and type of anxiety about testing, that is, they show

marked test anxiety.

Not all underachievers show deficits in each of these areas, nor is the relationship among these factors clear. It can, for example, be argued that underachievers are sometimes anxious ABOUT TESTS and, therefore, do poorly, or that they have done poorly and are therefore justifiably anxious about evaluative situations. Regardless of the relationship, for many underachievers remedial efforts in all of their weak areas should be explored and may yield helpful information.

As might be expected from the sample of students in two-year colleges, their reactions to tests and test taking were negative (Cross, 1971; p. 123-124). They have experienced failure before in such evaluative situations. Testing makes them worried and concerned. Under such circumstances it is not surprising that these students say they "choke up" or otherwise have difficulty with tests. In the next section research on test anxiety is examined.

Test Anxiety

An extensive body of literature exits on test anxiety; the literature has recently been reviewed (McPeake, 1975; Morrow, 1970; Wine, 1971), and the conclusions are presented before a summary of test anxiety theory:

1. The test-anxious student performs more poorly in academic situations than his less anxious counterpart.

Test-anxious students got poorer marks on examinations (Wine, 1971); received lower grades; and had a higher rate of

academic failure than other students (Morrow, 1970; Sarason, 1960; Spielberger, 1962; Walsh, Engbretson, and O'Brien, 1968).

2. Evaluative situations give rise to test anxiety.

In general, any situation which arouses the subject's test or achievement anxiety will impair his performance. For example, feedback concerning performance interferes with the behavior of the highly test-anxious (Mandler and Sarason, 1952). Instructions designed to ego-involve subjects in a task (The subjects were told that it would be easy to complete a task which was in fact impossible within the time limit allowed.) impaired the performance of high anxious subjects (Sarason, et al., 1952). A large number of other studies cited by Wine (1971) support the contention that evaluative situations impair the performance of the test-anxious subject.

3. The highly test-anxious person focuses on a narrower range of task cues.

During evaluative situations the highly test-anxious person appears to turn his attention inward, thus focusing on fewer task relevent cues, whereas the low anxious person focuses his attention on the task at hand (Easterbrooks, 1959; Wachtel, 1966, 1968). In one study, for example, the number of available cues for the learning of a task were systematically varied (Zaffy and Bruning, 1966). This had little effect on the behavior of the high anxious subjects, but the more cues available the better the low anxious sub-

jects performed.

4. The test-anxious person is generally more self-deprecatory and self-preoccupied.

Studies of the test-anxious person have shown that on paper-and-pencil tests such subjects describe themselves in negative self-devaluating terms (Sarason, 1960). In experimental studies, also, highly test-anxious subjects tended to blame themselves for failing at experimental tasks more often than did low anxious subjects (Wine, 1971). In several studies (Sarason, 1958; Sarason, 1968; Sarason and Ganzer, 1962; Sarason and Koenig, 1965) subjects were asked to describe themselves orally for one half hour. Nonreinforcement, reinforcement of negative self-references, and reinforcement of position self-references were compared. Regardless of the reinforcement condition, highly test-anxious subjects described themselves in more negative terms. Highly anxious students responded to reinforcements when the responses being reinforced were negative self-references and were resistant to conditioning when the response class was positive self-references.

5. Test anxiety is conceptualized as having two components of which "cognitive concern" over performance is the most debilitating.

A recent summary (Liebert and Morris, 1967) suggested that test anxiety can be conceived of as having two components. The first has been labelled "worry" and is described as cognitive concern over performance. The second, labelled

"emotionality," refers to the autonomic arousal aspects of test anxiety. Several studies utilizing this distinction (Doctor and Altman, 1969; Morris and Liebert, 1969, 1970) have shown that the cognitive concern over performance accounts for most of the performance decrement associated with test anxiety.

This section can be summarized by suggesting the following interpretation of the debilitating effects of test anxiety (Wine, 1971). In evaluative circumstances the highly test-anxious person becomes preoccupied with thoughts of failure, feelings of lack of self-esteem, and ruminative, self-evaluative worry. As a result he cannot pay attention to the task at hand and performs more poorly than others. This point of view suggests that what the test-anxious person is thinking about during the evaluative experience, his cognitive activity, is the relevant variable mediating test anxiety.

Alleviating Test Anxiety

Almost all of the studies which have attempted to alleviate test anxiety have employed some variation of the systematic desensitization procedure developed by Wolpe (1958) and described in Chapter III. Further, almost all such attempts have focused on four-year college students. These students have typically followed the pattern set by Paul (in Franks, 1969).

In his study 13 students from an introductory psychology course requested treatment for test anxiety after

taking the Mandler-Sarason Test Anxiety Questionnaire (Mandler and Sarason, 1952), hereinafter referred to as the TAQ. Eleven of these test-anxious students were assigned either to individual systematic desensitization (N=5) between their first and second course examinations or to a no contact control (N=6). These subjects were equated for TAQ score and degree of disturbance of test performance assessed under both relaxed and anxious conditions. On both the second examination and a later final examination, the experimental subjects improved significantly more than the control subjects. Verbal reports from the subjects suggested that the observed improvements were due to reductions in test anxiety.

Since Paul's study (in Franks, 1969) a series of studies have attempted to assess systematic desensitization for test anxiety under controlled conditions; compare individual and group desensitization procedures; compare systematic desensitization with other procedures; explore automated techniques of presenting systematic desensitization, such as audio and video tape presentations; and determine the aspects of the procedure which make it effective. These studies have been reviewed by McPeake (1975; p. 30) who suggested the following conclusions are warranted:

> Empirical Generalization #1. SD is effective in altering the subjects' reports of test anxiety as measured by a variety of self report scales. Eighteen of the twenty-two studies summarized by McPeake (1975) support this contention.
>
> Empirical Generalization #2. SD is sometimes effective in improving some performance measure, most

importantly GPA and/or exam grades, but also some other performance measures, e.g., anagram tasks, reading test performance, debilitated by test anxiety. Of the nineteen studies cited employing performance criteria, twelve support this generalization.

Empirical Generalization #3. Group SD appears as effective as individual SD. In addition to these studies which directly compared group versus individual SD, a large number of investigators cited by McPeake (1975) have employed group SD and obtained results consistent with individual SD.

Empirical Generalization #4. Standardized hierarchies are as effective as individual hierarchies in SD for test anxiety.

Empirical Generalization #5. Vicarious SD for test anxiety is as effective as the direct experience of SD.

Empirical Generalization #6. The effects of SD for test anxiety generalize to other fears and anxieties. Of the five studies investigating this problem, only one did not obtain a significant generalization effect.

Empirical Generalization #7. The effects of SD for test anxiety appear to be augmented by the addition of group counseling.

Despite these generalizations, major questions remain concerning the variables within the SD situation which contribute to reductions in test anxiety. For the purpose of this study, however, the significant question is "Can systematic desensitization be effectively employed with two-year college students to reduce test anxiety and increase academic success?" In the next section of this chapter, a study is described which attempted to answer this question.

Design of the Study

Subjects

Thirty unpaid Community College student volunteers served as subjects. Each subject had a two semester grade point average (GPA) of 3.0 or below (on a scale from 0.0=F to 4.0=A) and scored in the upper quartile on the Mandler-Sarason Test Anxiety Scale (TAQ, Mandler and Sarason, 1952) reproduced in Appendix 1. The 30 subjects were matched for GPA and assigned to one of the three treatment conditions described on the following pages.

Pre-testing

All of the subjects selected for the study were pre-tested for self ratings of test anxiety on a seven point Likert scale and were also asked to fill out the Fear Survey Schedule II (FSS II). These scales appear in Appendixes 2 and 3 respectively.

Procedure

The TAQ was administered to all entering sophomore students at the College during the Fall registration of 1974. Those subjects who met the two criteria of GPA and TAQ score were contacted by mail with a letter describing the purpose of the study. A copy of this letter appears in Appendix 4. Since the response to the initial letter was miniscule (N=2) it was followed with a telephone call describing the experiment and asking if the subject wished to participate.

Subjects were scheduled for their first experimental sessions during the third and fourth week of the semester. The treatment procedures were completed by the twelfth week of the semester and the subjects were mailed copies of the FSS II and the self rating form. Those students who did not return the form by mail were contacted personally.

Treatment Conditions

Systematic Desensitization

Each of the ten subjects in this group were told that they were participating in an experiment designed to reduce their anxiety. After a brief oral explanation of systematic desensitization, each subject received an initial 40 minute tape recorded training session in relaxation (adapted from Agras, 1972; p. 133). Due to the subjects' schedules some received the relaxation training alone while others received it with a maximum of four other people. The experimental room, the same for all subjects, consisted of a quiet office with five comfortable lounge chairs.

Each subject then received three additional treatment sessions. During each session the subject practiced relaxation with tape recorded instructions for 15 minutes. Then the subject was instructed to remain relaxed and calm while he was asked to imagine anxiety provoking scenes described by tape recorder. The scenes referred to in Table 2 were adapted from Mitchell and Ingham's (1970) standardized hierarchy for test anxiety.

Each scene was presented three times for about 20 seconds. Between presentations, subjects were instructed to relax and remain calm. During each of these three sessions, four items from the standardized hierarchy were presented beginning with the least anxiety provoking scenes during the first session, and continuing to the four most anxiety provoking scenes on the third session. Each experimental session lasted about 30 minutes.

TABLE 2

STANDARDIZED HIERARCHY FOR TEST ANXIETY
(AFTER MITCHELL AND INGHAM, 1970)

ITEMS

1. Hearing about someone else who has a test
2. Two weeks before test
3. Studying and wondering how you will remember the information when test comes
4. Several days before test
5. Night before test
6. Waking up the morning of the test
7. Walking to the test room
8. Talking with others outside the test room
9. Waiting for test paper to be passed out
10. First getting the test paper and looking at it
11. Seeing a question you do not know the answer to
12. Seeing others finish the test while you are still taking the test

Hypnosis

Each of the ten subjects in this group were told that they were participating in an experiment designed to reduce their test anxiety. After a brief oral explanation about hypnosis designed to offset any fears they might have about this procedure, each subject received an initial tape recorded hypnotic induction procedure lasting about 40 minutes (adapted from Barber, 1969). The experimental room was the same as for the desensitization group.

Each subject then returned for three additional treatment sessions. During each session the subjects received an initial tape recorded hypnotic induction lasting about 15 minutes. Then the subject was asked, via a tape recorder, to imagine the same scenes as the desensitization group, for the same number of times and durations, while remaining relaxed. With the single exception that each treatment session began with a hypnotic induction rather than relaxation training, the treatment sessions were the same. Each of the three experimental sessions lasted about 30 minutes.

Control

Each of the ten subjects in this group were told that they were participating in an experiment designed to assess procedures for reducing test anxiety. They were told that they were members of the control group and would be pretested and post-tested, but they would receive no other training or instructions. The use of a control group in ex-

perimentation was explained if the subjects did not already understand its significance. They were also told that if at a later date they wished treatment for test anxiety it would be provided. Concurrent with the end of the treatment sessions for the other two groups these subjects were also post-tested.

Post-testing

At the conclusion of the experiment, all subjects were contacted by mail and asked to fill out the FSS II and the self rating of anxiety. Those not responding by mail were contacted by the experimenter at the college. In addition, at the end of the semester the students' GPA was obtained, with the students' permission, from the registrar's office.

CHAPTER V

RESULTS

The mean of the sample (N=661) tested with the Mandler-Sarason Test Anxiety Scale (TAQ) was 13.34 and the standard deviation was 7.68. All of the subjects in this study scored at or beyond the sixteenth percentile on the TAQ. Figure 2 summarizes the distribution of scores on the TAQ.

The means and standard deviations for the four dependent measures employed in this study: a. grade point averages; b. subjective ratings of test anxiety; c. Fear Survey Schedule score; and d. item #4 on the Fear Survey Schedule (related to fear of tests), are summarized in Table 3. Part A of Table 3 gives the pre-test means and standard deviations and Part B shows the difference score means and standard deviations.

One-way analyses of variance were performed on each of the pre-test scores to determine if there were any significant pre-test differences among the three groups. None of these analyses were significant. Thus, it appears that experimental groups were equivalent prior to treatment.

One-way analyses of variance were also performed on the difference scores to determine the effects of the experimental treatments. Again, these analyses proved to be in-

significant. Thus, it appears that neither hypnosis nor systematic desensitization differentially affected the subjects' behavior or feelings of anxiety as measured in this investigation. The results of the analyses are presented in Table 4, Parts A and B.

By inspection of Part B of Table 3, it would appear that there was a generalized, but small, reduction of anxiety about tests and anxiety in general with a concommitant, and a small increase in the subjects' G.P.A. It would thus appear, at least superficially, that merely participating in such a research study might lead to minor benefits for all subjects.

Figure 2. Distribution of Scores on Mandler-Sarason Test Anxiety Scale.

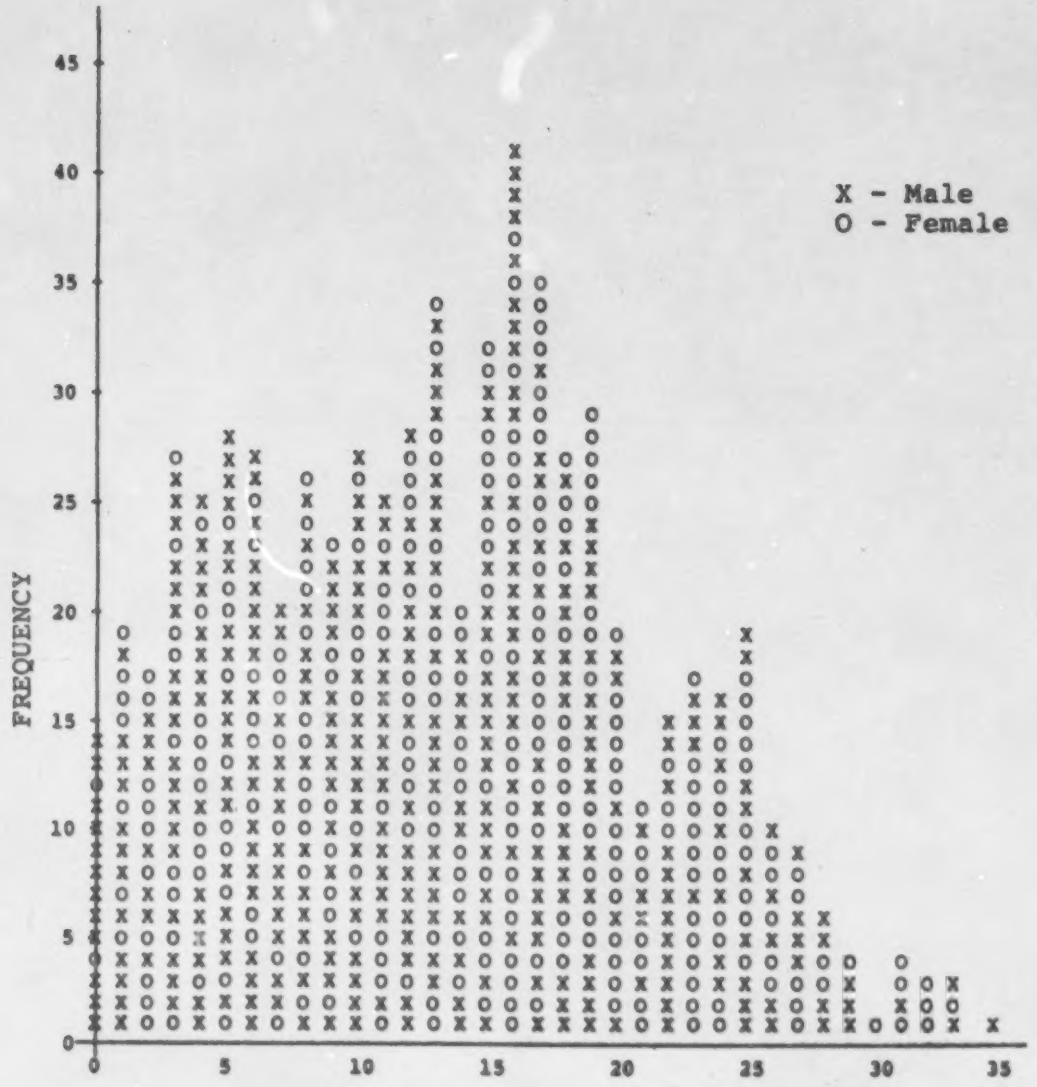


TABLE 3

MEANS AND STANDARD DEVIATIONS FOR DEPENDENT MEASURES
PRE-TEST AND DIFFERENCE SCORES

A. Pre-Test

Variable	Control		Hypnosis		Desensitization	
	$\bar{X}$	S	$\bar{X}$	S	$\bar{X}$	S
GPA	2.59	.55	2.53	.33	2.58	.43
Subj. Rate Anx.	5.2	1.8	5.2	1.3	6.1	.9
FSS II	118.7	38	122.10	23	117.7	28
FSS II Item #4	3.7	1.3	3.8	1.0	3.8	1.0

B. Difference Score

	$\bar{X}$	S				
GPA	+.02	.35	+.05	.30	+.03	.55
Subj. Rate Anx.	-.38	1.77	-.36	1.59	-.51	1.75
FSS II	-10.11	11.37	-13.56	14.05	-7.78	12.31
FSS II Item #4	-.4	1.14	-.3	.90	-.7	1.07

TABLE 4

RESULTS OF ANALYSES OF VARIANCE BY TREATMENTS FOR PRE-TEST AND DIFFERENCE SCORES

A. Pre-Test

VARIABLE	SOURCE	df	ms	F
GPA	T	2	.01	<1
	W	27	.2	
Subj. Rate Anx.	T	2	2.25	1.10
	W	27	2.04	
FSS II	T	2	52.52	<1
	W	27	912.21	
FSS II Item #4	T	2	2.04	1.87
	W	27	1.09	

B. Difference Scores

GPA	T	2	.01	<1
	W	27	.17	
Subj. Rate Anx.	T	2	2.61	1.02
	W	27	2.57	
FSS II	T	2	11.41	<1
	W	27	45.69	
FSS II Item #4	T	2	2.61	1.02
	W	27	2.52	

CHAPTER VI

DISCUSSION AND IMPLICATIONS

This paper began with a consideration of the community college in the general context of American higher education. American higher education began as a small and relatively unimportant part of a developing society with English aristocratic traditions. Education was clearly to be reserved for the wealthy, who would become leaders, and the clergy in an outpost of the British Empire. Further, the education that would be received was never intended to be practical or useful. It was an adornment of civilized gentlemen who aimed to fashion in the New England a world as similar to what they had known as was humanly possible.

The American Revolution and the expansion of the American Frontier sowed the seeds of a new tradition in American higher education. Parallel with the old classic curriculum there emerged a "practical" curriculum. A curriculum that was attuned to the needs of a developing nation where new techniques of agriculture would be necessary to feed an expanding and increasingly heterogeneous population; where the technical knowledge necessary to build roadbeds for the railroads, to build the steam trains and ships, and set up the factories, was becoming to most far more impor-

tant than the nuances of Greek and Hebrew.

Out of the Revolution, too, came a new conception of man. Anti-aristocratic, populist, democratic or whatever term one chooses, the frame of reference had shifted slightly. Really only slightly, however, as what was the aristocratic view of man and higher education remained deeply embedded in the American educational system in the network of private secondary schools as a feeder system for many of the most prestigious private, and some public colleges and universities.

In fact, to develop a system of higher education that gave more than lip service to a meritocratic system of education, innovative educators had to go outside the private liberal arts colleges and found technical and practical colleges that taught useful skills to a new breed of students. In the Morrill Act was distilled the essence of practical, meritocratic higher education. Throughout the latter half of the nineteenth and early twentieth century the proliferation of state-supported colleges and universities was truly dramatic and impressive. America had developed a system that, by all contemporary accounts, came close to fulfilling the meritocratic idea of a college education for anybody who had the intelligence to succeed in the academic environment of the university. By the nineteen fifties, the meritocratic philosophy had outstripped the original idea which led to college founding.

There remained, and remains right now, however, the problem of what to do with those individuals who were unable to profit from the competitive academic environment. As those holding the aristocratic conception had disparaged the rise of the university and the meritocratic system, so the holders of meritocratic views disparaged those who suggested that the rest of the population, the even greater majority, could, and should, receive advanced education beyond high school.

The first inkling that the great unwashed horde was even out there was William Rainey Harper's suggestion of splitting the four years of college into two and two and weeding out the academically unfit so the aristocrats of the intellect could pursue their studies in peace (Rudolph, 1962). And so the junior college was created as the terminal ground of the academically unfit. In a sense this view brings us up to date.

Few outside the community college movement understand it any better than the scholars at Harvard understood what in the world was going on at the Lawrence Scientific School for which they created a new degree, the B.S., to better protect the virginity of the B.A. Yet, like the university, the community college has grown to the point where it can no longer be ignored, where for better, or for worse, the idea of universal higher education is taking shape. With universal higher education has come the pressing need to rethink what it is we will do with these new students who literally

and figuratively have never been to college before.

The characteristics of these students have been explored. They are generally not as intellectually capable as their university peers, they come from homes where higher education is a new idea, they have other talents and potentials. Their attitudes toward work, toward school, and toward life are also different.

In chapter three it was suggested that there are new technologies developing in the behavioral sciences that might offer us an opportunity to help these students develop behaviors which will then help them to succeed in an academic environment. These techniques were described, the research on which they are based was described, and a study was suggested which aimed to explore the usefulness of these techniques in a delimited area of student functioning test taking. Following is a review of the findings of the study.

The Study Results

Following well-established procedures a large number of students were administered a questionnaire designed to assess their level of test anxiety. This questionnaire had been utilized in many of the previous published studies of test anxiety. Students scoring at or beyond the sixteenth percentile on this test were identified as the population of interest. This cutoff score was actually higher than that employed in much previous research.

Again following procedures widely used, a letter was mailed to each of these students describing the nature of

the research and inviting them to participate. The letter strongly suggested that if they participated in the study there was a good possibility that their academic averages might improve.

This "pitch" seemed reasonable based on the research studied and it was therefore surprising that only two (?) students returned the enclosed, stamped postcard indicating interest in the study (Appendix 5). One would think that such an offer would be hard to refuse for students who had low academic averages and measurable test anxiety. Previous research suggested or implied that more students would be interested in volunteering for such research.

Telephone follow-up represented the second course to obtain subjects. The nature of the study was described to each student and it was again suggested that if the student participated, the payoff might be a modest increase in his academic performance. The subjective impression from these phone calls was that the students were strangely reluctant to take advantage of what essentially amounted to "free" help. It is interesting to note parenthetically that in the process of trying to reach the individual students it was necessary from time to time to talk to the students' parents. Several of the parents were very impressed with the idea that a research study which might help their son or daughter, was underway. They were sure that their offspring would be interested.

An additional finding of interest, again a subjective impression, was that the higher the student's average the MORE willing he was to participate. In fact some students who were not asked to participate contacted the investigator and asked him if they might join the study. In one case, for example, the student had a GPA of 3.6 and hoped that if she were less anxious on tests she might increase an already very high academic average.

As an undercurrent in this study the students' lack of motivation to help themselves seemed a fairly prominent finding. There is no other study in the published literature which discusses in any detail the subject's motivation for participation. Was this simply because other writers didn't find this a characteristic of their samples?

The students' subjective ratings of anxiety which were employed as an additional measure of test anxiety suggested that the subjects did not in general perceive themselves as anxious as the TAQ suggested. A fact confirmed by examining item four on the FSS II related fear of tests. Analysis of all four dependent measures, however, indicated that the control, hypnosis, and experimental groups were not different from each other.

Analysis of the post-testing scores, difference scores, indicate the major finding of this experiment. Despite the fact that previous researchers had found desensitization to be an effective procedure for reducing test anxiety when compared to a control condition, this finding was

not confirmed in the present study. The three groups did not differ from each other in reductions of test anxiety as indicated by any of the measures employed. As can be seen by simple inspection of Table 3 in Chapter V all of the subjects showed minor improvements, i.e., in performance, as a result of participation in this study. But the major finding is not consistent with most of the published literature.

The obvious question becomes what do these results mean? There are several possible explanations which can be considered. First, it is conceivable that the failure to at least confirm the finding that SD is effective for test anxiety was a product of the procedures employed, or the way the procedures were employed, or the setting in which they were administered. This seems unlikely, however. According to Paul (in Franks, 1969) the major problem to be encountered in using SD is the development of the hierarchy used in desensitization. Since a standardized hierarchy was employed, previously used in other studies, this is probably not a relevant consideration. In addition, the procedures employed, i.e., the relaxation or hypnotic procedures, were all taped and the same for all subjects. The experimental room and furnishings were comfortable, quiet and consistent with those which have been described in other literature.

Another possibility is that the acceptance of the null hypothesis is a product of subject variables. It has been continually emphasized that community college students are different from four-year college students. All of the

previous published studies have employed four-year college students almost without exception (it should be noted that in some studies junior high or high school students have been employed but this only represents three of the studies). It is thus conceivable that community college students are different enough from four-year college students that they do not respond well to either of the procedures utilized here. For example, it is known that anxiety relates to performance in a curvilinear fashion (Spielberger, 1962) affecting most dramatically the middle levels of ability. If we conceive of the subjects as low in academic ability, it follows that relieving them of anxiety may not alter their performance very dramatically. These students, in fact, generally come from the middle end of the ability level in the general population despite the fact that they are lower in academic ability when compared to four-year college students.

It seems that two-year college students differ from four-year college students in their motivation to participate in this type of research. Examination of the literature seems to indicate that getting subjects for this type of study at four-year colleges or universities is not a problem. Yet it did appear a consideration in this research. This may be because, as Cross (1971) has suggested, two-year college students are afraid of "trying again" because of their many previous failure experiences. On the other hand, more practical considerations may be relevant.

Community college students, more often than four-year college students, are employed, have families, and even frequently work full-time while going to school. Such activities leave little surplus time for participating in someone elses research projects, no matter how important they are to the researchers. Four-year college residential students are in a better position in this regard and, in addition, appear more interested in activities defined as "research" (Cross, 1971).

If this conclusion is accepted then, it suggests that what Cross (1971) has argued that techniques useful at the four-year college level may not be suitable for two-year college students. This does not suggest that behavioral approaches be rejected in general, but that other behavioral methods which might be more appropriate with this sample of students should be explored.

There is an alternative hypothesis, however, which is appealing in the sense that it is more parsimonious and fits better with existing theory and research. In the reported studies of test anxiety, and in fact in many of the studies done on SD, the magnitude of the reported changes in grade point average, or subjective rating scales of one sort or another, are relatively small. Thus it seems possible that any such effect might be submerged by other factors. One possibility is that merely participating in the study had the effect of mildly improving the students' performance. Such effects have been noted in the literature beginning

with the famous Hawthorne study. A show of interest and concern for the students' performance might be enough to produce the improvements noted.

That simple interest and concern is an effective and often overlooked variable in therapeutic processes was documented by Frank (1961, p. 243-244):

> That a procedure which merely convinces a person that the therapist is interested in him and doing something for him can cause prolonged relief even of specific symptoms has been shown by an unusually well-conceived and executed study of treatment by different methods of college students with interpersonal performance anxiety. Not only did the same proportion of students receiving only "attention-placebo" treatment improve as those receiving insight-oriented therapy, but all maintained or increased their improvement when re-examined two years later.

The control group in this experiment was not exactly the same as the attention-placebo condition commented on above; nevertheless, the subjects were initially interviewed and then contacted at the end of the experiment. In a growing and busy community college the very fact that someone is interested enough to do research and be concerned about what is happening to the student may well be enough in and of itself to produce the mild degree of improvement noted in this study.

Implications: General

1. Most psychological research has been developed using four-year college students as the sample; generalizations from this group to other groups should be made with caution.

Since much of the research data collected in the social sciences has been collected using college students from four-year colleges or universities, the applicability of the findings to other groups is questionable. McNeil (1974, p. 18) noted:

> The bulk of psychological findings on human subjects reported in the journals in the 1960's was derived from male college students. This bright, young, affluent group cannot possibly reflect the average person in our country nor tell us much about poor people, racial minorities, women or old people.

In the same vein Schultz (1969, p. 224) said:

> The situation is cause for serious and constructive alarm within psychology. . .If our source of data is open to question then surely one can legitimately question the validity of that data.

Research should be devoted to attempting to replicate previously established findings with different populations.

2. The motivation of subjects who participate in research must be taken into account whenever possible.

Social scientists are increasingly concerned about the reasons subjects have for participating in research. Rosnow (1970) suggested that good experimental subjects are like "Boy Scouts." Such subjects, he said, wish to be as helpful as they possibly can during an experiment. They try and find out what the experimenter desires in an experiment and then they give it to him. It is thus conceivable that those subjects who are willing to get involved in research are very different from those who are less willing or completely unwilling.

3. In research which involves "remediation" of one sort or another, it may be difficult or impossible to obtain the subjects who actually need remedial help.

Cross (1971) pointed out that it is often the case that students who involve themselves in remedial programs of one kind or another are often the students who need it the least. Those students who have consistently done poorly in academic situations have frequently developed, according to Cross, the attitude that they are not going to do well anyway and trying will only result in another failure. Therefore, they develop the unstated philosophy that what you don't try can't hurt you. One serious problem in this area is developing systems that provide incentives for those people who ordinarily won't get themselves involved.

Implications: for Student Personnel Services

1. In the search for procedures to help students, student service personnel cannot uncritically accept programs which are effective in four-year colleges or universities.

It would seem from what was observed in this study that caution should be observed in uncritically accepting techniques that have proven successful with other types of students. Student personnel professionals must ask "What aspects of new procedures might be affected by the sample normally seen in community colleges?" In addition, pilot programs ought to be employed to determine the usefulness of techniques taken from other educational areas.

2. Programmatic research by student personnel professionals should be encouraged.

This suggestion would seem to have a twofold usefulness. If more research is done to explore the usefulness of techniques with the two-year college population, those techniques which are effective can be discriminated from those that are not effective. In the process information about the two-year college student can be gained.

At the same time it appears that research programs which demonstrate to the student a sincere interest in his success may be beneficial in and of themselves. Whether this is called a Hawthorne effect or a placebo effect, the phenomenon is useful.

3. Since many student services personnel have four-year college backgrounds, in-service educational programs which sensitize them to the special needs of the two-year college student are highly desirable.

As long as community college professionals see two-year college students as being the same as four-year college students there will be an obvious tendency to deal with them in the same way. Training programs of an in-service nature could be helpful in encouraging these professionals to rethink their attitudes toward the students and the procedures they employ with them.

4. Rather than focusing our efforts on trying to make over the two-year college student into the image of the four-year college student, more effort should be devoted to

new ways to teaching and learning which are tailor-made to his needs.

This would complement the attempt to gather specific information about the two-year college student. Once a large body of information on such students is accumulated, the implications for the kind of programs that are offered can be traced. Rather than change round pegs for square holes we should make the attempt, as Cross (1971) suggested, to construct round holes. In other words, more attention should be devoted to innovative educational programs which suit two-year college students.

APPENDIX 1

THE TEST ANXIETY SCALES (COLLEGE FORMS)

The Mandler and Sarason Form of the Test Anxiety Scale

QUESTIONNAIRE ON ATTITUDES TOWARD THREE KINDS OF TESTING SITUATIONS

NAME: (Please Print)_____

BIRTHDATE: Month_____Day_____Year_____

EXPECTED YEAR OF DEGREE_____Class_____VETERAN?_____

This questionnaire is designed to give you an opportunity to indicate how and what you feel in regard to three types of testing situations:

(a) The group intelligence or aptitude test, such as those you took upon entrance to college.
(b) The course examination.
(c) The individual (face-to-face) type of intelligence test.

One of the main reasons for constructing this questionnaire is the fact that very little is known about people's feelings toward the taking of various kinds of tests. We can assume that people differ in the degree to which they are affected by the fact that they are going to take a test or by the fact that they have taken a test. What we are particularly interested in here is how widely people differ in their opinions of and reactions to the various kinds of testing situations.

The value of this questionnaire will in large part depend on how frank you are in stating your opinions, feelings, and attitudes. Needless to say, your answers to the questions will be kept strictly confidential; they will under no circumstances be made known to any instructor or official of the University.

We are requesting you to give name, class, etc. only because it may be necessary for research purposes.

Each of you has taken a course examination and group intelligence or aptitude test, but not all of you have taken an individual intelligence test. Those of you who have not taken such a test are requested to answer the relevant questions in terms of how you think you would react to them. We want to know what you think your attitudes and feelings toward taking such a test would be and not what you think they ought to be. Those who have taken an individual intelligence test will, of course, answer the questions in terms of what they actually experience.

For each question there is a line or scale on the ends of which are statements of opposing feelings or attitudes. In the middle of the line you will find either the word "Midpoint" or a phrase, both of which are intended to reflect a feeling or attitude which is in between the statements of opposing feelings described above. You are required to put a mark (X) on that point on the line which you think best indicates the strength of your feelings or attitude about the particular question. The midpoint is only for your guidance. Do not hesitate to put a mark on any point on the line as long as that mark reflects the strength of your feeling or attitude.

If you have any questions at this time, please ask the person who has passed out the questionnaire.

THERE ARE NO "CATCH" QUESTIONS IN THIS QUESTIONNAIRE. PLEASE READ EACH QUESTION AND EACH SCALE VERY CAREFULLY. THERE IS NO TIME LIMIT.

THE MIDPOINT IS ONLY FOR YOUR GUIDANCE. DO NOT HESITATE TO PUT A MARK (X) ON ANY POINT ON THE LINE AS LONG AS THAT MARK REFLECTS THE STRENGTH OF YOUR FEELING OR ATTITUDE.

SECTION I

The following questions relate to your attitude toward and experience with group intelligence or aptitude tests. By group intelligence tests we refer to tests which are administered to several individuals at a time. These tests contain different types of items and are usually paper and pencil tests with answers requiring either fill-ins or choices of several possible answers. Scores on these tests are given with reference to the standing of the individual within the group tested or within specific age and educational norms. The Medical College Aptitude Test (or the College Entrance Board) which you have taken represents this type of

test. Please try to remember how you actually reacted toward these tests and how you felt while taking them.

1. How valuable do you think group intelligence tests are in determining a person's ability?

/ / /
Very valuable | Valuable in some respects and valueless in others | Valueless

2. Do you think that group intelligence tests should be used more widely than at present to classify students?

/ / /
Should be used less widely | Should be used as at present | Should be used more widely

3. Would you be willing to stake your continuance in college on the outcome of a group intelligence test which has previously predicted success in a highly reliable fashion?

/ / /
Very willing | Uncertain | Not willing

4. If you know that you are going to take a group intelligence test, how do you feel beforehand?

/ / /
Feel very unconfident | Midpoint | Feel very confident

5. After you have taken a group intelligence test, how confident do you feel that you have done your best?

/ / /
Feel very unconfident | Midpoint | Feel very confident

6. When you are taking a group intelligence test, to what extent do your emotional feelings interfere with or lower your performance?

/ / /
Do not interfere at all | Midpoint | Interfere a great deal

THE MIDPOINT IS ONLY FOR YOUR GUIDANCE. DO NOT HESITATE TO PUT A MARK (X) ON ANY POINT ON THE LINE AS LONG AS THAT MARK REFLECTS THE STRENGTH OF YOUR FEELING OR ATTITUDE.

7. Before taking a group intelligence test to what extent are you aware of an "uneasy feeling"?

/_____/_____/
Am very much aware of it | Midpoint | Am not aware of it at all

8. While taking a group intelligence test to what extent do you experience an accelerated heartbeat?

/_____/_____/
Heartbeat does not accelerate at all | Midpoint | Heartbeat noticeably accelerated

9. Before taking a group intelligence test to what extent do you experience an accelerated heartbeat?

/_____/_____/
Heartbeat does not accelerate at all | Midpoint | Heartbeat noticeably accelerated

10. While taking a group intelligence test to what extent do you worry?

/_____/_____/
Worry a lot | Midpoint | Worry not at all

11. Before taking a group intelligence test to what extent do you worry?

/_____/_____/
Worry a lot | Midpoint | Worry not at all

12. While taking a group intelligence test to what extent do you perspire?

/_____/_____/
Perspire not at all | Midpoint | Perspire a lot

13. Before taking a group intelligence test to what extent do you perspire?

/_____/_____/
Perspire not at all | Midpoint | Perspire a lot

THE MIDPOINT IS ONLY FOR YOUR GUIDANCE. DO NOT HESITATE TO PUT A MARK (X) ON ANY POINT ON THE LINE AS LONG AS THAT MARK REFLECTS THE STRENGTH OF YOUR FEELING OR ATTITUDE.

14. In comparison with other students how often do you think of ways to avoid a group intelligence test?

/ / /
Less often than other students — Midpoint — More often than other students

15. To what extent do you feel that your performance on the College Entrance Test (or a similar test) was affected by your emotional feelings at the time?

/ / /
Affected a great deal — Midpoint — Not affected at all

SECTION II

The following paragraph relates to your attitude towards individual intelligence tests and your experience with them. By individual intelligence tests we refer to tests which are administered to one individual at a time by an examiner. These tests contain different types of items and thus present a variety of tasks. Those tasks can be both verbal and manipulative, i.e., verbal or written answers to questions or manipulation of objects such as is involved in puzzles, form boards, etc. Examples of tests of this type would be the Standard-Binet test and the Wechsler-Bellevue test. Please try to remember how you have usually reacted toward these tests or how you would expect to react to them.

16. Have you ever taken any individual intelligence test?

Yes No (Circle the appropriate answer)

If your answer to the above question is YES, indicate in the questions below how you do or did react to individual intelligence tests.

If your answer to the above question is NO, indicate in the following questions how you think you would react to or feel about individual intelligence tests.

17. When you are taking an individual intelligence test, to what extent do (or would) your emotional feelings interfere with your performance?

/ / /
Would not interfere with at all — Midpoint — Would interfere a a great deal

THE MIDPOINT IS ONLY FOR YOUR GUIDANCE. DO NOT HESITATE TO PUT A MARK (X) ON ANY POINT ON THE LINE AS LONG AS THAT MARK REFLECTS THE STRENGTH OF YOUR FEELING OR ATTITUDE.

18. If you know that you are going to take an individual intelligence test, how do you feel (or expect that you would feel) beforehand?

Would not feel very confident	Midpoint	Would feel very confident

19. While you are taking an individual intelligence test, how confident do you feel (or expect that you would feel) that you are doing your best?

Would not feel very confident	Midpoint	Would feel very confident

20. After you have taken an individual intelligence test, how confident do you feel (or expect that you would feel) that you have done your best?

Would feel very unconfident	Midpoint	Would feel very confident

21. Before taking an individual intelligence test, to what extent are you (or would you be) aware of an "uneasy feeling"?

Am not aware of it at all	Midpoint	Am very much aware of it

22. While taking an individual intelligence test, to what extent do you (or would you) experience an accelerated heartbeat?

Heartbeat does not accelerate at all	Midpoint	Heartbeat noticeably accelerated

23. Before taking an individual intelligence test, to what extent do you (or would you) experience an accelerated heartbeat?

Heartbeat does not accelerate at all	Midpoint	Heartbeat noticeably accelerated

THE MIDPOINT IS ONLY FOR YOUR GUIDANCE. DO NOT HESITATE TO PUT A MARK (X) ON ANY POINT ON THE LINE AS LONG AS THAT MARK REFLECTS THE STRENGTH OF YOUR FEELING OR ATTITUDE.

24. While taking an individual intelligence test to what extent do you (or would you) worry?

/ / /
Worry a lot — Midpoint — Worry not at all

25. Before taking an individual intelligence test to what extent do you (or would you) worry?

/ / /
Worry a lot — Midpoint — Worry not at all

26. While taking an individual intelligence test to what extent do you (or would you) perspire?

/ / /
Would never perspire — Midpoint — Would perspire a lot

27. Before taking an individual intelligence test to what extent do you (or would you) perspire?

/ / /
Would never perspire — Midpoint — Would perspire a lot

28. In comparison with other students, how often do you (or would you) think of ways of avoiding an individual intelligence test?

/ / /
More often than other students — Midpoint — Less often than other students

SECTION III

The following questions relate to your attitude toward and experience with the course examination. We refer to major examinations such as mid-terms and finals, in all courses, not specifically in any one course. Try to represent your usual feelings and attitudes toward these examinations in general, not toward any specific examination you have taken. We realize that the comparative ease or difficulty of a particular course may influence your attitude toward the examinations; however, we would like you to try to express your feelings toward course examinations generally. Remember that your answers to these questions will not be available, at any time, to any of your instructors or to any official of the University.

THE MIDPOINT IS ONLY FOR YOUR GUIDANCE. DO NOT HESITATE TO PUT A MARK (X) ON ANY POINT ON THE LINE AS LONG AS THAT MARK REFLECTS THE STRENGTH OF YOUR FEELING OR ATTITUDE.

29. Before taking a course examination, to what extent are you aware of an "uneasy feeling"?

Am not aware of it at all	Midpoint	Am very much aware of it

30. When you are taking a course examination, to what extent do you feel your emotional reactions interfere with or lower your performance?

Do not interfere with it at all	Midpoint	Interfere a great deal

31. If you know that you are going to take a course examination, how do you feel beforehand?

Feel very unconfident	Midpoint	Feel very confident

32. After you have taken a course examination, how confident do you feel that you have done your best?

Feel very unconfident	Midpoint	Feel very confident

33. While taking a course examination, to what extent do you experience an accelerated heartbeat?

Heartbeat does not accelerate at all	Midpoint	Heartbeat noticeably accelerated

34. Before taking a course examination, to what extent do you experience an accelerated heartbeat?

Heartbeat does not accelerate at all	Midpoint	Heartbeat noticeably accelerated

35. While taking a course examination, to what extent do you worry?

Worry a lot	Midpoint	Worry not at all

THE MIDPOINT IS ONLY FOR YOUR GUIDANCE. DO NOT HESITATE TO PUT A MARK (X) ON ANY POINT ON THE LINE AS LONG AS THAT MARK REFLECTS THE STRENGTH OF YOUR FEELING OR ATTITUDE.

36. Before taking a course examination, to what extent do you worry?

/ / /
Worry a lot Midpoint Worry not at all

37. While taking a course examination, to what extent do you perspire?

/ / /
Never perspire Midpoint Perspire a lot

38. Before taking a course examination, to what extent do you perspire?

/ / /
Never perspire Midpoint Perspire a lot

39. When, in your opinion, you feel well prepared for a course examination, how do you usually feel just before the examination?

/ / /
Confident Midpoint Anxious

THE MIDPOINT IS ONLY FOR YOUR GUIDANCE. DO NOT HESITATE TO PUT A MARK (X) ON ANY POINT ON THE LINE AS LONG AS THAT MARK REFLECTS THE STRENGTH OF YOUR FEELING OR ATTITUDE.

APPENDIX 2

LIKERT SCALE
(seven point)

PLEASE READ AND ANSWER CAREFULLY

In general when I take tests I feel: (check one)

extremely anxious	moderately anxious	slightly anxious	neither anxious nor relaxed
_____	_____	_____	_____

slightly relaxed	moderately relaxed	extremely relaxed
_____	_____	_____

APPENDIX 3

FEAR SURVEY SCHEDULE II

Please rate the following items in terms of the intensity of your fear towards them. Be honest and please rate all the items as they apply to you.

	Item	Circle One						
1.	Sharp objects	None	Very Little	A Little	Some	Much	Very Much	Terror
2.	Being a passenger in a car	None	Very Little	A Little	Some	Much	Very Much	Terror
3.	Dead bodies	None	Very Little	A Little	Some	Much	Very Much	Terror
4.	Failing a test	None	Very Little	A Little	Some	Much	Very Much	Terror
5.	Suffocating	None	Very Little	A Little	Some	Much	Very Much	Terror
6.	Looking foolish	None	Very Little	A Little	Some	Much	Very Much	Terror
7.	Being a passenger in an airplane	None	Very Little	A Little	Some	Much	Very Much	Terror
8.	Worms	None	Very Little	A Little	Some	Much	Very Much	Terror
9.	Arguing with parents	None	Very Little	A Little	Some	Much	Very Much	Terror
10.	Rats and Mice	None	Very Little	A Little	Some	Much	Very Much	Terror
11.	Life after death	None	Very Little	A Little	Some	Much	Very Much	Terror
12.	Hypodermic needles	None	Very Little	A Little	Some	Much	Very Much	Terror
13.	Being criticised	None	Very Little	A Little	Some	Much	Very Much	Terror
14.	Meeting someone for the first time	None	Very Little	A Little	Some	Much	Very Much	Terror
15.	Roller Coasters	None	Very Little	A Little	Some	Much	Very Much	Terror
16.	Being alone	None	Very Little	A Little	Some	Much	Very Much	Terror
17.	Making mistakes	None	Very Little	A Little	Some	Much	Very Much	Terror
18.	Being misunderstood	None	Very Little	A Little	Some	Much	Very Much	Terror
19.	Death	None	Very Little	A Little	Some	Much	Very Much	Terror
20.	Being in a fight	None	Very Little	A Little	Some	Much	Very Much	Terror
21.	Crowded places	None	Very Little	A Little	Some	Much	Very Much	Terror

22.	Blood	None	Very Little	A Little	Some	Much	Very Much	Terror
23.	Heights	None	Very Little	A Little	Some	Much	Very Much	Terror
24.	Being a leader	None	Very Little	A Little	Some	Much	Very Much	Terror
25.	Swimming alone	None	Very Little	A Little	Some	Much	Very Much	Terror
26.	Illness	None	Very Little	A Little	Some	Much	Very Much	Terror
27.	Being with drunks	None	Very Little	A Little	Some	Much	Very Much	Terror
28.	Illness or injury to loved ones	None	Very Little	A Little	Some	Much	Very Much	Terror
29.	Being self-conscious	None	Very Little	A Little	Some	Much	Very Much	Terror
30.	Driving a car	None	Very Little	A Little	Some	Much	Very Much	Terror
31.	Meeting authority	None	Very Little	A Little	Some	Much	Very Much	Terror
32.	Mental Illness	None	Very Little	A Little	Some	Much	Very Much	Terror
33.	Closed places	None	Very Little	A Little	Some	Much	Very Much	Terror
34.	Boating	None	Very Little	A Little	Some	Much	Very Much	Terror
35.	Spiders	None	Very Little	A Little	Some	Much	Very Much	Terror
36.	Thunderstorms	None	Very Little	A Little	Some	Much	Very Much	Terror
37.	Not being a success	None	Very Little	A Little	Some	Much	Very Much	Terror
38.	God	None	Very Little	A Little	Some	Much	Very Much	Terror
39.	Snakes	None	Very Little	A Little	Some	Much	Very Much	Terror
40.	Cemeteries	None	Very Little	A Little	Some	Much	Very Much	Terror
41.	Speaking before a group	None	Very Little	A Little	Some	Much	Very Much	Terror
42.	Seeing a fight	None	Very Little	A Little	Some	Much	Very Much	Terror
43.	Death of a loved one	None	Very Little	A Little	Some	Much	Very Much	Terror
44.	Dark places	None	Very Little	A Little	Some	Much	Very Much	Terror
45.	Strange dogs	None	Very Little	A Little	Some	Much	Very Much	Terror
46.	Deep water	None	Very Little	A Little	Some	Much	Very Much	Terror
47.	Being with a member of the opposite sex	None	Very Little	A Little	Some	Much	Very Much	Terror
48.	Stinging insects	None	Very Little	A Little	Some	Much	Very Much	Terror
49.	Untimely or early death	None	Very Little	A Little	Some	Much	Very Much	Terror

50.	Losing a job	None	Very Little	A Little	Some	Much	Very Much	Terror
51.	Auto accidents	None	Very Little	A Little	Some	Much	Very Much	Terror

NAME: _____

ADDRESS: _____

PHONE: _____

Are you currently receiving psychotherapy? Yes ☐ No ☐

APPENDIX 4

September 27, 1974

Dear

As part of a research survey of students' attitudes towards tests and test taking, you filled out a questionnaire at sophomore registration. The score you received on this questionnaire appears to indicate that when you take tests you become excessively worried and anxious, and this anxiety interferes with your performance. Thus, all other things being equal, you do not do as well on tests as you might and your grades may therefore suffer.

This semester I will be conducting research designed to help test anxious students overcome this problem. Based on previous studies, the procedures employed in this experiment should be helpful in eliminating worry and concern about tests; raise your grade point average; and teach you techniques to help you reduce anxiety in other situations.

If you feel that you could receive some benefit from this research and would like to participate, please contact Dean Simmons, Student Center or Miss Nancy Adams, Secretary to the Dean of Students, or call me at the College 588-9100, extension 116.

Sincerely,

Roy D. Simmons, Jr.
Dean of Students

RDS/nd

APPENDIX 5

(Response post card)

(Postage)

Dean Roy D. Simmons, Jr.
Massasoit Community College
290 Thatcher Street
Brockton, Massachusetts 02402

I am interested in participating in your research project and will see Miss Nancy Adams, Student Center, to make an appointment with you.

Signed_____

GLOSSARY

Aversion procedures - The presentation of noxious or unpleasant stimuli in conjunction with a response to be eliminated or inhibited.

Implosion therapy - Flooding a patient with signals or cues of feared objects or situations with the intention of extinguishing the fear response.

Meritocratic - Criteria for college admissions should be based on intellectual ability alone, or on merit.

Operant behavior - Emitted or "voluntary" behavior as opposed to elicited behavior as in classical conditioning.

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